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Marshall, J. T.
1946-1948

1. Catalog of specimens, local and miscellaneous, Mar. 1946 - Nov. 1947.
2. General account, June 1946 - Aug. 1946 California
3. Species accounts, 1946-48
4. Species account of Melospiza melodia, April 1946 - June 1948

Marshall, J.T.
Catalog nos. 3395 – 3850
March 1946 - Nov. 1947.

Marshall, Joe

1946 - 1948

I. Specimen Register

II. General Account

III. Miscellaneous Species Accounts

IV. Species Account of *Melospiza melodia*

Marshall, Joe

Specimen Register

3395 — 3850

March 24, 1946 — November 1, 1947

Marshall, 1946

Tassajero Creek, 8 mi E 3 mi S Danville, Contra Costa Co., Calif.

March 24

3395 ♀ ad Melospiza melodia insects, fat, oviduct lg, ova 7mm 25 g. no brood patch

N. side Mt. Diablo (nr Tomville), Contra Costa Co., Calif.

3396 ♂ ad Amophila ruficeps seeds testes 4 mm. 19 g.

Tomales Point, Marin Co., Calif

May 5

3397 ♀ Melospiza melodia about to lay, fat insects, seeds feet pale brownish tarsus to 1st fixed scale: 19.6 = 2nd widened scale. to first widened scale = 18.2

total length	144	tail	55.1	middle toe	14.3	culmen	14.3	depth	6.3	21.6
wing	56.5	tarsus (to widest scale)	20.7	hind toe	10.8	bill from nostril	8.4	width	6.3	

E. side Botanical Garden, Strawberry Canyon, Berkeley, Alameda Co. Calif.

June 1

3398 ♂ Perompeus californicus 202 - 98 - 27 - 21 25.5 g.

3399 ♂ Sorex trowbridgii 115 - 45 - 14 - 8 5.5 g.

Redwood Creek, 1/3 3/4 mi NE Redwood Peak, Contra Costa Co., Calif.

June 25

3400 ♂ Hylocichla guttata testes 10 mm, cloacal glands large beetles 21.5 g.

iris dark brown, upper mand & distal half lower mand very dk brown, basal half pale dull orange. Angle mouth & inside mouth bright yellow, ft grey-brown

San Leandro Creek, 1 mi NE Redwood Peak, Contra Costa Co., Calif.

June 29

3401 ♂ juv Pentheretes rufescens feet light blue-grey; bill black, base l. m. blue-grey insects testes 1 mm, little fat

3402 ♂ ad " " " cloacal gl. absent. testes 2 mm bill blackish ft blueish-grey no fat

3403 ♀ juv " " " very small bill blackish, ft blue-grey little fat ovary small

3404 ♀ juv " " " " " " " " " some fat

West of Porter St., Altadena, Los Angeles Co., Calif.

July 20

3405 ♂ Phalaenoptilus testes 2 mm., some fat, stom full beetles

3560
341R
149

151

3485
W12
71

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foothills n. Altadena, Los Angeles Co., Calif.

July 21

3406 ♂ Selasphorus sassin testes .5 little fat

3407 ♀ Hummer Calypte costae ovary small, much fat

S.Sl. Santa Ana R., 8000 ft; San Bernardino (Co.) Calif. mts.

July 29

3408 ♂ ad Cyanocitta stelleri testes 4 mm. stom: nut or seed meats

Dry Lake, 9000 ft; San Bernardino Mts., Calif.

July 30

3409 juv Turdus

July 31

3410 ♀ juv Sitta pygmaea ovary small, stom: sm. beetles

S.Sl. Santa Ana R., 8000 ft San Bernardino Mts. (Co.), Calif.

August 1

3411 ♀ juv. Carpodacus cassini moderately fat

Alcum salt marsh, Contra Costa Co., Calif.

September 14

3412	im	Melospiza	skull all single	some fat		19.4g
3413	♂ im	"	skull half single	"		20.0g.
3414	♀ im	"	" all "	little	"	18.7g.
3415	♀ im	"	" mostly "	"	"	17.2g.
3416	♂ ad	"	" all double	"	"	20.2g.
3417	♀ im	"	" mostly single	"	"	19.6g.
3418	♀ im	"	" " "	"	"	19.2g.
3419	♂ ad	"	" all double	moderate	"	20.4g.
3420	♀ im	"	" half single	little	"	18.0g.
3421	♂ ad	"	" all double	moderate	"	20.8g.
3422	♂ im	"	" mostly double	little	"	22.0g.

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Canada del Cierbo, Contra Costa Co., Calif.

September 14

3423	♂ im	Melospiza melodia		skull all single	little fat	20.3g.
3424	♂ im	"		"mostly "	no fat	20.4g.
3425	♀ ad	"	ovary mature bird of previous year	"all double	" "	18.4g
3426	♀ ad	"	ovary mature but small	" " "	moderate "	19.3g.
3427	♂ ad	"		" " "	little fat	19.0g.
3428	♀? "ad"	"	gonads too small to be seen	" " "	" "	17.4g.
3429	♂? im	"		"partly single	" "	20.2g.
3430	♀ juv	"		" all "	" "	18.3g.

Southampton Bay salt marsh, Solano Co., Calif.

September 15

3431	♀ ad	"	ovary mature	skull all double	some fat	18.2g.
3432	im	"		" mostly single	little fat	18.2g.
3433	♂ im	"		" " "	" "	19.0g.
3434	♂ im	"		" " "	some fat	20.2g.
3435	♂? im	"		" partly "	" "	19.0g.
3436	♀ im	"		" " "	" "	17.2g.
3437	♂ im	"		" all "	" "	19.5g.
3438	♂ ad	"		" " double	" "	21.4g.
3439	♀ ad	"	ovary mature	" " "		19.9g.
3440	♂(?) ♀ ad	"	(" small ?)	" " "	moderate "	19.2g.

Cordelia Slough, Solano Co., Calif.

3441	♀ im	"		skull all single	very fat	18.0g.
3442	♀ ad	"	ovary mature	" " double	moderate fat	18.1g.
3443	♂ im	"		" partly single	some fat	21.6g.
3444	♀(?) im	"		" " "	" "	18.5g.
3445	♂(?) ad	"		" all double	moderate fat	20.5g.
3446	im	"		" " single	some fat	19.8g.

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Cordelia Slough, Solano Co. Calif.

September 15

3447	♂ im	Melospiza	skull all single	moderate fat	20.6g.

Jameson Canyon, Napa Co., Calif.

3448	♀ ad	" fairly large	skull all double	little fat	17.5g.
3449	♂ ad	"	" " "	"	22.9g.

mouth of Petaluma Creek, Sonoma Co., Calif.

September 16

3450	♀ im	"	skull mostly single	little fat	17.8g.
3451	♂ ad	"	skull all double	little fat	20.0g.
3452	♂ ad	"	skull all double	some fat	19.8g.
3453	♂ ad	"	skull all double	moderate fat	18.1g.

Point Reyes Station, Marin Co., Calif.

September 17

3454	♂ ad	"	skull all double	little fat	19.9g.
3455	♂ ad	"	" " "	"	20.0g.
3456	im	"	" " single	"	19.0g.
3457	♂ ad	"	" " double	"	21.5g.
3458	♂ ad	"	" " "	"	20.8g.
3459	♀ ad	"	" " "	"	17.6g.
3460	♂ ad	"	" " "	"	20.0g.
3461	♀ ad	"	" " "	"	17.9g.
3462	♂ im	"	" " single	"	20.4g.
3463	♀ im	"	" " "	"	17.9g.

mouth Petaluma Creek, Sonoma Co., Calif.

3464	♂ ad	"	skull all double	some fat	19.2g.
3465	♂ ad	"	" " "	"	21.1g.
3466	♀ im	"	" mostly single	"	17.2g.
3467	♂ im	"	" all "	little fat	18.0g.
3468	♀ (?) im	"	" " "	some "	18.0g.

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Catalog

mouth Petaluma Creek, Sonoma Co. Calif (salt marsh)
September 17

3469	♂ ad	melospiza melodia	skull all double	some fat	18.6 g.
3470	♀ im	"	" partly single	" "	17.9 g.
3471	♂ im	"	" all "	little fat	18.5 g.

salt marsh Mouth Gallinas Creek, Marin Co. Calif.

3472	♀ ad	"	skull all double	little fat	17.0 g.
3473	♀ ad	"	" " "	" "	16.5 g.
3474	♀ im	"	" partly single	" "	16.1 g.
3475	♂ ad	"	" all double	some "	18.6 g.
3476	♂ im	"	" mostly single	little fat	18.2 g.
3477	♀ ad	" very small	" all double	" "	18.6 g.
3478	♀ ad	" " "	" " "	" "	17.0 g.
3479	♀ ad	" very mature	" " "	some fat	17.3 g.
3480	♂ ad	"	" " "	" "	18.3 g.
3481	♂ ad	"	" " "	moderate "	17.8 g.
3482	♂ ad	"	" " "	some "	19.0 g.

Ravenswood Pt., salt marsh, San Mateo Co., Calif.
September 19

3483	♂ im	"	skull all single	some fat	18.2 g.
3484	♂ im	"	" mostly "	" "	19.2 g.
3485	♂ ad	"	" all double	" "	19.4 g.
3486	♂ im	"	" partly single	" "	18.4 g.
3487	♂ ad	"	" all double	moderate fat	19.5 g.
3488	♀ ad	"	" " "	some "	17.2 g.
3489	♀ im	"	" mostly double	" "	18.5 g.
3490	♀ im	"	" partly "	" "	17.0 g.
3491	♀ im	"	" mostly single	" "	16.6 g.
3492	♀ im	"	" all "	little "	16.5 g.

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Catalog

salt marsh, San Leandro Bay, Alameda Co., Calif.
September 19

3493	♀ im	Melospiza	skull all single	some fat	16.9g.
3494	♀ ad	"	" " double	little "	16.9g.
3495	♂? im	"	" " single	little fat	17.7g.
3496	♂ im	"	" " "	moderate fat	19.3g.
3497	♀ im	"	" " "	little fat	17.1g.
3498	♀ im	"	" " "	" "	16.5g.
3499	♀ im	"	" mostly "	" "	17.4g.
3500	♀ "ad"	"	one small virgin probably. skull all double, some fat		16.1g.
3501	♀ im	"	" mostly single little fat		15.6g.
3502	♂ ad	"	" all double	" "	19.6g.

1½ mi N Alvarado, Alameda Co., Calif. (fresh water marsh)

3503	♀ im	"	skull partly single	little fat	17.2g.
3504	♂ ad	"	" all double	" "	20.4g.
3505	♂ ad	"	" "	" "	19.0g.
3506	♂ im	"	" mostly single	some fat	19.3g.
3507	♀ ad	"	(old follicles) ovary mature skull all double	" "	18.0g
3508	♂ ad	"	testes relatively large as in other true ad.	" "	19.2g.
3509	♂ ad	"	" "	little fat	19.2g.
3510	♂ ad	"	" "	" "	18.2g.
3511	♂ ad	"	" "	" "	18.7g.
3512	♂ ad	"	skull very thick	" "	19.5g.

Richardson Bay, Marin Co., Calif (salt marsh)

3513	♀ ad	"	ovary mature skull all double	some fat	18.5g.
3514	♂ ad	"	"	" "	20.5g.

Elk Valley, Marin Co., Calif.
September 20

3515	♂ ad	"	skull all double	some fat	19.5g.
3516	♂ im	"	" mostly single	med. fat	20.1g.

Marshall, 1946

Catalog

Elk Valley, Marin Co. Calif. (coastal)
September 20

3517 ♂ im Melospiza melodia skull mostly single some fat 20.9g
3518 ♀ im " " " " " " 19.5g.
3519 ♂ ad " " all double " " 21.2g.
3520 ♂ im " " " single " " 21.2g.
3521 ♀ ad " ovary mature " " double little fat 19.1g.
3522 ♂ ad " " " " moderate fat 20.0g.
3523 ♂ im " " " single some fat 22.2g.
3524 ♂ im " " mostly single " " 20.2g.

salt marsh mouth Corte Madera Creek, Marin Co., Calif.

3525 ♀ im " skull partly single little fat 18.3g.
3526 ♂ ad " " all double some " 20.2g.
3527 ♀ ad or " ovary mature," " " ; little fat, 19.0g.
3528 ♀ ad " " " " " " " " 18.6g.
3529 ♂ ad " " " " " " 20.5g.
3530 ♂ ad " skull very thick " " 20.0g.
3531 ♂ im " skull partly single, some fat 19.7g.
3532 ♂ ad " skull all double, little fat ~~19.0g~~.
3533 ♀ "ad" " ova small, skull double but translucent 17.5g.
3534 ♂ ad " " " 19.6g.

Canada del Cierbo, Contra Costa Co. Calif.
September 22

3535 ♂ ad " testes rel. large, skull double, little fat 20.2g.
3536 ♂ im " skull all single, " " 19.6g.
3537 ♂ ad " " " double " " 19.7g.

Jameson Canyon, Napa Co., Calif.

3538 ♂(?) ad " skull all double, little fat 19.3g.
3539 ♂ ad " testes relatively large," " " some fat 18.4g.
3540 ♂ ad " " " " " " " " 18.6g.

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Jameson Canyon, Napa Co., Calif.
September 22

3541 ♀ ad melospiza skull all double, some fat, 17.7g.
3542 ♂ ad " " " " " " 20.0g.
3543 ♀ ad " " " " " " 17.7g.
3544 ♂ im " "mostly double little fat 18.8g.
3545 ♂ im " " " single " " 18.6g.

Cordelia slough, Solano Co Calif.

3546 ♂ im " skull all single, some fat 22.8g.
3547 ♂ im " " mostly " " " 20.0g.
3548 ♀ im " " all " " " 17.6g.
3549 im " " partly " " " 18.5g.
3550 ♀ im " " all " " " 17.0g.

marshes 2½ mi W Pittsburg, Contra Costa Co., Calif.

3551 ♀ im " skull all single, some fat, 20.4g.

marshes 2½ mi W Pittsburg, Contra Costa Co. Calif.

3552 ♀ ad" " very small skull all double, moderate fat 19.0g.
3553 ♂ im " " mostly single " " 20.8g.
3554 ♀ im " " all " " " 18.5g.
3555 ♂ im " " mostly " " " 20.9g.
3556 ♂? "ad" " skull all double & granulated some fat but very thin 19.6g.
3557 ♀ im " skull mostly single, some fat 19.0g.
3558 ♂ im " " partly " " " 21.1g.
3559 ♂ im " " all " " " 21.2g.
3560 ♀ im " " " " " 18.6g.

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Catalog

Rodeo Creek, Contra Costa Co., Calif.

March 29

3561 ♂ ad Agelaius seeds, caterpillars testes 13 mm

Sonora, Tuolumne Co., Calif.

April 5

3562	♀ ad	Otus asio	ovum 13 mm	brood patch, oviduct enlarged excessive fat 1 lg. (40 mm +) olive green caterpillars	7.0 oz.
3563	♂ ad	"	"	testes 10 mm no fat lg caterpillars, some beetles, centipedes	6.0 oz
3564	♂ ad	"	"	" " " " " 1 beetle	5.5 oz

W. end 2d. Mt. I, Solano Co., Calif.

April 11

3565	♂	Melospiza melodia	cloacal glands very large, some fat	testes 7 mm.	18.5 g.
3566	♂	"	" " " " " "	" 7.5 mm	17.6 g.
3567	♂	"	" " " " "	, medium fat " 8 mm	21.1 g.

1 mi N Alvarado, Alameda Co., Calif.

April 20

3568	♂	Melospiza melodia	testes 7 mm.	insects lg. cloacal glands	19.8 g.
3569	♂	"	"	" 8 mm. some fat " " " "	21.5 g.
3570	♂	"	"	growth on rt. foot " " "	21.4 g.
3571	♀	"	"	medium fat brood patch has laid	19.6 g.

salt marsh 0.7 mi E Cordelia, Solano Co., Calif.

April 27

3572	♂	Melospiza melodia	cglg	little fat	t 9	18.3 g
3573	♂	"	"	" some "	t 7	19.8 g
3574	♂	"	"	" little "	t 8	19.9 g
3575	♂	"	"	" " "	t 8	19.9 g

willows of Suisun Creek, 3.5 mi WSW Suisun, Solano Co. Calif.

3576	♂	Melospiza melodia	cgl	no fat	t 7	20.9 g
3577	♂	"	"	some "	t large	19.4 g
3578	♀	"	"	brood patch		20.5 g

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Catalog

willows 450 yds from bay shore, Burlingame, San Mateo Co., Calif. (2.7 mi W San Mateo Point)

April 29

3579 ♂ Melospiza melodia some fat, cgl g., testes 7.5 mm 18+ g.

willows mouth Patterson Creek (E side Red Hill), Alameda Co. Calif.

May 3

pair 3580 ♂ Melospiza melodia some fat (fat dark) cgl. t.9 17.8 g.
3581 ♀ " " fat lighter little " brood patch 18.5 g.

salt marsh mouth Patterson Creek (N side Red Hill) Alameda Co.

3582 ♂ Melospiza melodia fat light some fat testes 7 cgl 17.8 g.
3583 ♂ " " " " " " 8 " " " 19.2 g.
3584 ♀ " " " " moderate " brood patch 18.1 g.
3585 ♀ " " " " little " " " 17.1 g.

willows Napa River 1¼ mi S Napa, Napa Co. Calif.

May 16

3586 ♂ Melospiza melodia cgl testes 8 medium fat 20.8 g.
3587 ♂ " " " " " some " 18.2 g.
3588 ♂ " " " " " " " 22.0 g.
3589 ♂ " " " " " " " 20.0 g.
3590 ♂ " " " " " " " 19.5 g.
3591 ♂ " " " " " " " 20.7 g.
3592 ~~♀~~♂ " " ~~brood patch~~ " 7 " " 20.5 g.
3593 ♀ " " brood patch bare bill (lower) & ft lighter-pink (rest of birds blackish horn-grey) " " 18.4 g.
3594 ♀ " " " " " " " 17.3 g.
3595 ♀ " " " " " " " 18.2 g.

w bank Napa River, 3½ mi S Napa, Napa Co. Calif.

May 19

3596 ♂ Melospiza melodia cgl testes 7 little fat 20.0 g.
3597 ♂ " " " " 10 " " 20.8 g.
3598 ♂ " " " " 8 some " 19.9 g.
3599 ♂ " " " " 8 " " 19.0 g.

Marshall, 1947 July 3 Swift

Catalog

w bank Napa R., 3½ mi S Napa, Napa Co. Calif.
May 19

3600 ♂ Melospiza melodia cgl testes 7 mm some fat 19.1g.
3601 ♂ " " " 9 " " 19.5g.
3602 ♂ " " " 8 medium " 20.3g.
3603 ♂ " " " 7 some " 20.2g.
3604 ♂ " " } pair " 9 " " 18.7g.
3605 ♀ " " } bill light ft pinkish (rest of birds dusky) brood patch has lain oviduct small " " 17.0g.

= Waterman Mt of recent #2 = nw side Waterman Mt., 6600 ft. LA. Co. Calif.
LA Co maps. highway 4½ mi E Chilao, San Gabriel mts, LA. Co., Calif.

June 16 11:30 PM stom very full undigested
Dickey Coll. feet very pale moderate uniform fat stom - 3 lg moths & other digested insects & moths
3606 ♂ Otus scops iris brown, bill pearl gray whitish at tip

June 17 1:30 AM
Dickey Coll. stom full of digested insect remains testes 4-5 mm
3607 ♂ " " iris brown, colors same as above extensive mod fat-white

(Presented to Dickey Collection)

Whitaker's Forest, W slope Redwood Mt., 5500 ft., Tulare Co., Calif.

June 21 collected at dusk
bill whitish, cere & base lift yellowish-green.
3608 ♂ Glaucidium iris yellow, ft yellow, claws gray becoming blackish at tips, stomach 1 but bird probably Pileolated Warbler
testes 5 mm very small, narrow. Heavy fat, Complete molt

north fk. Silver Creek, 4800 ft, Eldorado Co., Calif.

June 29 stom full of large black ants
3609 ♂ Sphyrapicus varius testes very small
3610 ♂ Asio otus * * * * testes small, stom empty, iris yellow little fat

east side Robb's Pk., 5900 ft. Eldorado Co. Calif.

10 mi S Pinnacles, San Benito Co., Calif.

July 17 exposed skin of head bright yellow
3611 ♀ ad Pica stom full Avena & ants ova ovary small, ad 159g

Berkeley, Alameda Co., Calif.

August 11
3612 ♀ Phalaropus ovary sm— looks mature emaciated 36.5g.
3613 ♀ Zobripes ova sm " in very fat 36.0g.

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Catalog

San Gabriel mts., Los Angeles Co., Calif.
on hiway between Palmdale & Angeles Crest
July 3

3614 *Aeronautes*

Guadalupe River, 7/8 mi SE Alviso, Santa Clara Co., Calif.
(Each specimen located on map) September 16 12-2 PM

3615	♂ ad	Melospiza melodia	mod fat	testes 1.5	black round seeds (probably Conium)	19.1 g.
3616	♀ ad	" Salicornia Conium	no fat		sm. snails	19.0
3617	♂ im	" Salix	med fat		seeds	20.5
3618	♀ ad	" brush pile at bank	some fat		seeds & green veg. material	19.5
3619	♂ im	" Bot Elder	mod fat		seeds & some snails	20.7
3620	♀ ad	" Salix	some fat		seeds (Conium?), sm insects, veg fibers	18.7
3621	♂ im	" Salix	some fat		a few seeds, greens, sm. insects	21.9
3622	♂ ad	" Salix	mod "		sm. snails, veg. material, seeds, shoots	20.1
3623	♀ ad	" Salix	some "		many snails, shoots, seeds	17.6
3624	♀ im	"Chenopodium at disturbed edge	some "		insects, snails, ~~shoots~~, ~~seeds~~	19.5

Guadalupe River, salt marsh, ½ mi SE Alviso, Santa Clara Co., Calif.
(Each specimen located on map) 2-4 PM

3625	♂ ad	" Salicornia	some fat		snails, seeds, veg. mat., insects	19.6
3626	♀ ad	" grindelia	mod. fat		" , " , " , "	17.6
3627	♂ ad	" grindelia	mod. fat		" , insects	19.6
3628	♂ ad	" grindelia	mod fat		" , larger "	18.5
3629	♂ im	" grindelia	some fat		" , insects	19.6
3630	♂ im	" grindelia	mod fat		red seeds, insects	19.6
3631	♀ ad	" grindelia	"	"	snails, insects	18.2
3632	♂ ad	" grindelia	some fat		" , " , 1 lg. seed	19.1
3633	♂ ad	" Salicornia	mod. fat		snails ~~red seeds~~, insects	19.1
3634	♂ ad	" Salicornia	mod fat.		7 lg caterpillars, snails, others sm. insects	18.7

Guadalupe River, 1½ mi SE Alviso, Santa Clara Co., Calif.
(Each specimen located on map) 4-6 PM

3635	♀ im	" Salix	some fat		seeds (sm. insects)	19.2
3636	ad	" Salix	mod. "		" (sm. insects)	20.9

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Guadalupe River, 1½ mi SE Alviso, Santa Clara Co., Calif.
September 16

3637	♀ad	melodia Melospiza,	Rubus (Blackberry)	mod. fat	veg. material, fruit (sm. insects)	18.3
3638	♀im	"	Salix	some fat	fruit? plant material	17.8
3639	♂im	"	Conium	much fat	black seeds ◊ ○ Conium?	20.1
3640	♀ im	"	Conium-Rubus (Blackberry)	" "	fruit, seeds	20.7
3641	♂im	"	Conium	" "	seeds	19.9
3642	♀ im	"	Rubus sp. Blackberry	mod. "	seeds, veg. material	17.9

Guadalupe River, salt marsh, ½ mi SE Alviso, Santa Clara Co. Calif.

3643	♀ad	Rallus	ovary mature	ft olive-tan, bill olive-dusky, sides & base orange, iris orange	snails	358.3g.

Sonoma Creek, ½ mi S Hiway 37 bridge, Sonoma Co. Calif (Scirpus californicus)
(Specimens located on map at B in order shown there)
September 18 10-11AM stomachs much fuller than those taken in afternoon

3644	♀ad	Melospiza melodia	Scirpus californicus	fat	seeds, sm. arthropods	18.1
3645	♀im	"	"	"	some fat	seeds, insects	20.0
3646	♂im	"	(jaw song)	"	"	some fat	sm. insects, seeds	18.8
3647	♀ad	"		"	"	very fat	seeds, sm insects	19.0
3648	♂im	"		"	"	fat	seeds, insects	20.1
3649	♂ad	"		"	"	fat	sm insects, seeds, crustacean claw	19.9
3650	♂ad	"		"	"	some fat	seeds, some sm. insect parts	22.0
3651	♂im	"		"	"	some fat	beetles, seeds	19.9
3652	♀im	"		"	"	fat	seeds	17.0
3653	♂(?)im	"		"	"	fat	seeds, several sm. spiders (?).	20.2

salt slough nr. Sonoma Creek, 1¼ mi NNW Wingo, Sonoma Co., Calif.
(Specimens located on map at C) 12-2 PM

3654	♂ad	"	Spartina	fat	beetles, other insects, crustacean claws a few seeds	19.8
3655	♀im	"	Scirpus calif & campestris	very fat	seeds, insects, crustacean claws (arthropods)	18.1
3656	♀im	"	Baccharis	fat	invertebrates, a few seeds	18.1
3657	♀ad	"	Scirpus campestris → Baccharis	fat	insects, snails, claws, a few seeds much fine green plant material.	19.0
3658	♀im	"	Spartina	fat	insects, claws	18.6

Marshall, 1947

Catalog

↓ edge of River
Spartina 6-8' in
S. campestris 5' with
occasional patch taller
acutus (where always sparrows)
wide belt
S. olneyi 10-20'
Salicornia 10'

Sonoma Creek, salt marsh, Wingo, Sonoma Co., Calif. (Scirpus campestris)

Specimens taken at "D" on map 9 go in serial order from rt to left (E to W) all on S bank.

September 18 2-4 PM

at bridge	3659	♀ ad	Melospiza melodia	S. campestris	very fat	insects, mosquito larva, sm isopod, 1 snail	18.8g.
	3660	♀ ad	"	" " (5' tall)	fat	mosquito larvae Scirpus seeds, sm insect parts	18.8g.
	3661	♀ im	"	patch of S. acutus in middle of S. campestris	fat	sm insects, crushed snails	18.9
	3662	♀ im	"	S. campestris & some S. acutus	mod. fat	Sciapus seeds, sm insects, crushed snails, a lg. organism	16.8
	3663	♂ ad	"	S. campestris	fat	insects beetles	21.6
	3664	♀ ad	"	" "	fat	larger insects incl mosquito larvae	18.2
	3665	♂ ad	"	" "	fat	bits of green leaves, insect parts, Scirpus seeds, a few whole snails.	21.0g
	3666	♀ ad	"	" "	very fat	Scirpus seeds, many claws of invert.	17.7
	3667	♂ ad	"	" "	very fat	" " , " " " " , 1 lg snail egg? snails	18.8
1/3 mi NW bridge where marsh narrows	3668	♀ im	"	S. olneyi	fat	Scirpus & other sm. seeds, 1 whole snail	18.9

4-6 PM (3669 & 3670 are 3/4 mi N bridge, rest all at same spot at "A")

Sonoma Creek, 5/8 mi N highway 37 bridge, Sonoma Co. Calif. (Salix)

	3669	♂ im	"	weeds & Alder scrub	much fat	seeds, 1 sm spider	19.6g
	3670	♂ im	"	salix scrub	moderate fat	seeds	20.6
	3671	♀ im	"	salix	very fat	seeds	17.2g.
	3672	♀ ad	"	salix scrub	mod. fat.	seeds	17.0g.
	3673	♂ im	"	Salix scrub	" "	"	21.9g.
	3674	♂ im	"	Salix	some "	"	19.2g.
	3675	♂ im	"	"	mod "	"	21.5
	3676	♂ im	"	"	some "	"	20.4
	3677	♂ ad	"	"	mod. "	"	21.5
	3678	♀ ad	"	"	" "	"	19.3

Alviso Slough, Santa Clara Co. Calif.

All at "A" on map in serial order from S to N see map of May 12+14.

September 21 6-8 AM

	3679	♀ im	"	Grindelia	little fat	beetles, other insects	15.3
	3680	♂ ad	"	Grindelia & Salicornia	moderate fat	sm. arthropods, some snails & seeds	17.7
	3681	♀ im	"	Salicornia-Spartina	some fat	arthropods, green leaves & Spartina? flowers	16.9
	3682	♀ im	"	Grindelia	no fat	insects (horse fly) isopods	18.0

Marshall, 1947

Catalog

Alviso slough, Santa Clara Co., Calif.
September 21

3683	♂ ad	Melospiza melodia	Grindelia	some fat	insects, 2 snails	17.8 g.
3684	♂ im	"	Salicornia	little fat	seeds, insects	16.8 g.
3685	♂ ad	"	Spartina	some fat	some insects green buds & leaves,	—
3686	♀ ad	"	Spartina-Salicornia	little fat	seeds, insects	17.6
3687	♂(?) im	"	Grindelia (most is solitary ^ dead)	no fat	insects, many (whole) snails	20.0
3688	♀ im	"	Spartina	little fat	arthropods, seeds, snails	15.5

~~Guadalupe R., 1½ mi SE Alviso, Santa Clara Co. Calif.~~

3689	♂ ad	"	Salicornia (also Spartina, Distichlis, Grindelia, Jaumea)	little fat	singing & fighting with 3690 insects singing & fighting with 3689	18.1
3690	♂ ad	"	Salicornia	little fat	arthropods, green buds	17.5

Guadalupe R. 1½ mi SE Alviso, Santa Clara Co. Calif.

Specimens located on map. 9 AM

3691	♂ im	"	Salix	fat	seeds, insect parts rare	—
3692	♂ im	"	Populus	fat	(territorial response to imitated song) seeds	19.7

* Guadalupe R., 4½ mi SE Alviso, Santa Clara Co. Calif.

3693	♂ im	"	Alder	fat	seeds, veg. material	20.4
3694	♂ ad	"	Box Elder	fat	insects, beetles, maggots	19.6
3695	♀ im	"	Elder	fat	sm. insects, a few seeds	17.9
3696	♀ im	"	Box Elder	fat	veg material, a few seeds, sm insect parts a very few	19.5
3697	♂ ad	"	Box Elder	mod. fat	seeds, sm insects	19.0
3698	♀ ad	"	Salix-Typha	moderate fat (did call)	veg material, ~~seeds~~ a few sm insects	16.9
3699	♂ im	"	Salix	some fat (silent)	seeds, a few sm. insects	20.4
3700	♂ ad	"	Salix	fat	seeds (+ fruit?)	21.6
3701	♂ im	"	Box Elder	very fat (silent)	insects, some seeds	—
3702	♀ im	"	Ash, Salix, Rosa	fat	seeds, a few sm. insect parts	19.4

* ~~3703~~ —— * These specimens taken at E on map of May 12 & 14 '47 in serial order from NW → SE except 3702, which was back even with about 3698. All 11 AM - 2 PM

Marshall, 1947

Catalog

Bayshore, mouth Sonoma Creek, Solano Co., Calif.

larvae parasit. on Spartina?

September 26 10-11 AM

3703	♀im	Melopiza melodia	fat	Baccharis	fat	"Spartina" food = cream or yellow-green colored long chaff & seeds & shoots found dead in burrow not near the shore-line spartina seeds	16.7 g.
3704	♂ad	"	dead Baccharis edge S campestris 30"	some fat	squashed	brown chaff & seeds "Spartina" sm. insect parts	18.9
3705	♀ad	"	Spartina	fat		green Spartina chaff, insect larvae, black rocks	18.2
3706	♂ad	"	Spartina	fat	squashed	Green Spartina material many larvae, other insects	18.6
3707	♀im	"	Spartina 4'	very fat	yellow fat gape	seeds, tiny insects, mandibles of Neuropteran larvae, an annellid	17.7
3708	♂ad	"	Spartina	fat		a fly, Spartina green chaff mostly, 2 black rocks	17.2
3709	im	"	Spartina	fat	1 mandibles mostly "claws" of Neuropteran larvae	Spartina chaff, sm. insects black rocks	18.6
3710	♂ad	"	Salicornia	fat		"Spartina" flowers, Endiv. green shoots, a few sm insects & larvae black rocks	18.9
3711	♀ad	"	S. campestris	very fat	squashed	"Spartina" fruit & bract (green) large ovary minute insects	18.3
3712	♂im	"	Spartina	some fat		green veg. looks like Spartina fruit, minute insects	19.0

Sebastopol, Sonoma Co., Calif.

September 26 6PM & 27 8 AM

3713	♂im	"	Salix	fat		seeds, a few insects	20.4
3714	♀ad	"	Salix • Blackberry	very fat		seeds	18.5 21.8
3715	♂ad	"	Salix	fat		seeds, rocks, a few sm insects	~~20.8~~
3716	♀? im	"	Salix	fat		seeds, rocks	20.2
3717	♂im	"	Salix	27th 8:30 AM little fat		" "	20.1
3718	♂im	"	Salix	27th 8:30 AM molting-no fat		seeds, greens, sm. insects	21.1

Sonoma Creek, 1 mi S. Glen Ellen, Sonoma Co., Calif.

September 27 6-7 AM

3719	♂im	"	Salix	little fat		(about 6) higher Diptera, larvae & pupae along or wet margin large maggots, some seeds	20.8 19.3
3720	♂ad	"	"	"	"	(2 g wings) insects, seeds	~~20.3~~
3721	♂ad	"	"	"	"	seeds, a few sm. insects	21.7
3722	♂im	"	"	"	"	grain, sm insects	20.0
3723	♂ad	"	Salix-Blackberry	some fat		veg material, " "	19.9
3724	♀ad	"	Salix	some fat		seeds " "	19.1
3725	? im	"	"	little "	12th	larvae & pupae of Diptera lg insects same as 3719, seeds	19.0

Marshall, 1947

Catalog

Sonoma Creek, 1 mi S Glen Ellen, Sonoma Co., Calif.

September 27

3726	♀ im	Melospiza melodia	Salix	little fat	lg. arthropods? sm insects seeds?	16.4 g.
3727	♀ ad	"	Salix-Polygonum also alders	"	seeds, a few insects	17.8
3728	♀ ad	"	Grey Salix some	"	insects, a few seeds	17.8

salt marsh, Pinole, Contra Costa Co., Calif.

October 1 5:30-6 AM

3729	♂ im	Melospiza melodia	Salicornia some fat	"flycatching" from a 3' stake	pts of lg. ant in big chunks, 1 mosquito in bill	19.8
3730	♀ ad	"	Chenopodium-Salicornia some fat	pts of 1 mosquito, comple seeds		17.9
3731	♂ ad	"	Grindelia-Distichlis fat	body of a large orthopteran (yellow gape (call when 1st light)	only 2 sm rocks	19.6
3732	♂ ad	"	mud eppozmes surrounded by Spartina some fat	only 2 sm rocks	a mosquito, chunks of large ant, yellow-green Spartina flowers	17.8

salt marsh, San Pablo, Contra Costa Co., Calif. 6:30-7:30 AM

3733	♂ im	"	Spartina-salicornia some fat	mosquito legs in mouth	gt nos. sm. insects, snails, Spartina flowers	18.7
3734	♀? im	"	Spartina fat	gt ant finely-divided insect material	18 snails	17.2
3735	♀ im	"	Salicornia-Spartina fat	"spartina flowers"	2 snails	18.5
3736	♂ ad	"	Spartina some fat	1 inch long caterpillar	sm insects, Spartina, Snail	18.1

bay shore, mouth Alviso Slough (west bank), Santa Clara Co., Calif.

October 3 8:30-9:30 AM

3737	♂ ad	Melospiza melodia	Grindelia some fat	snails, insects, "claws",	green veg.	19.0
3738	♂ im	"	Salicornia-Spartina fat	flew to board across little slough	snails, insects, mosquito larva	17.5
3739	♂ im	"	grindelia fat	when bunch of grindelia heads placed by rodent.	insects, snails	18.0
3740	♂ im	"	" little fat	(was eating a grindelia head (dead) perched on top of "bush")	insects, snails, 1 peeled grind. seed in entrance	18.0
3741	♂ ad	"	" some fat	dozens of mosquito larvae, a whole fly, snails, insects.		19.0
3742	♂ ad	"	" very fat	insects, a fly, claws, a few snails		19.0
3743	♀ im	"	" some fat	mosquito larvae, other insects, seeds, snails, green Spartina		16.1
3744	♂ ad	"	" little fat	insects, "claws", snails		18.2
3745	♀ ad	"	" fat	Whole green Spartina flowers & fruit, insects, mosquito larvae, snails		16.9
3746	♂ ad	"	" some fat	larger insects, a few snails		18.2

"

Marshall, 1947

Catalog

~~upper~~ San Francisquito Creek (Webb Ranch), 225', San Mateo Co. Calif.

October 3 1-2 PM

3747	ad		Melospiza melodia	fat	Symphoricarpos & other berbs; seeds, a few sm. insect parts	under a laurel & maple nr. pond	17.4g.
3748	♂ im	"	Blackberry & Rose	fat	seeds, a few sm. insects	under Willow & Alder by pond	19.8
3749	♂ im	"	Symphoricarpos	fat	seeds & many insect parts	nr. willows & Alders & Laurel, oak	19.8

salt marsh 1¾ mi WSW Pt San Bruno, San Mateo Co. Calif.

October 5 7-8AM

3750	♂ im	"	Salicornia	fat	black seeds, 3 or 4 (larvae), insects		20.6
3751	♂ im	"	"	"	full of a strange beetle (black & white)		18.9
3752	♀ ad	"	"	some"	(many) same larvae as above; green algae strands		16.8
3753	♀ im	"	"	" "	" " " " , brown seeds, insects		16.1
3754	♀ im	"	"	little"	insects, bebbles.		16.4

8:30-10 AM (= Potrero Pt. on Palo Alto quadrangle)

salt marsh ½ mi S Dumbarton Bridge, Alameda Co. Calif.

3755	♂ im	"	Salicornia	fat	insects, snails		18.9
3756	♀ ad	"	"	"	seeds, insects, snails		16.7
3757	♂ ad	"	"	"	insects, snails		19.8
3758	♂ im	"	"	"	about 20 whole snails, few insects		19.0
3759	♂ ad	"	"	"	50± flies		18.8
3760	♀ ad	"	"	very "	seeds, snails		17.7
3761	♂ ad	"	"	"	beetles, other insects, snails		18.1
3762	♀ ad	"	"	"	big snails, few insects		16.6
3763	♀ im	"	"	"	insects incl a fly, a few snails		17.0
3764	♀ im	"	"	very "	flies, seeds? ^fly eggs? other insects		15.8

October 8 3-4 PM

Suisun Slough, 8 mi N Suisun Hill, Solano Co., Calif.

3765	♂ im	"	Scirpus acutus	fat	seeds		20.2
3766	♂ ad	"	"	" very fat	seeds, sm isopod, sm crustacean		21.2
3767	♂ ad	"	"	" & Typha fat	seeds		20.9
3768	♂ im	"	"	" very fat	seeds, ants		20.7
3769	♀ ad	"	"	" "	", a few sm. insect parts		19.0

Marshall 1947

Catalog

* The seeds in this series of 10 sparrows are very numerous, stomachs full of seeds of many kinds - all colors & shapes - about 6 or 7 or more kinds at least.

Suisun Bay shore, Grizzly Isl., 3 mi so. Grizzly Isl. ferry, Solano Co. Calif.

October 8 5 - 5:30 PM

3770	♂ im	Melospiza melodia	Scirpus acutus	very fat	filled with seeds, parts of about 1 insect *	20.9 g.
3771	♂ im	"	"	fat	" " "	20.2
3772	♂ im	"	Scirpus calif & Typha	very fat	molting seeds, claws, some sm. insect parts	21.0
3773	♂ im	"	" " " "	" "	green leaves, seeds, sm. insects	19.7
3774	♀ ad	"	" acutus	" "	seeds	19.8
3775	♂ im	"	" calif. & Typha	" "	"	21.4
3776	♀ im	"	" acutus	fat	larger arthropods, seeds	18.6
3777	♂ im	"	" "	"	seeds, sm. insects	19.3
3778	♂ im	"	" californicus	"	seeds, insects	20.3
3779	♂ ad	"	" acutus	very"	seeds, 1 insect	20.5

Richardson Bay, Marin Co., Calif.

October 11 11 AM - 2 PM in order

3780	♀ im	"	Poison Oak edge salt marsh,	some fat	seeds, rock, a few insect pts.	18.0
3781	♂ ad	"	Salicornia	fat	2 ♀ flies larvae: segments of isopod?, rocks some seeds	20.5
3782	♀ im	"	Spartina	fat	Spartina fruit, snails, seeds	17.9
3783	♂ ad	"	Spartina	very fat	Snails, Spartina	19.8

Corte Madera, Marin Co. Calif. 5 PM

3784	♀ im	"	Typha	very fat	veg material, a few insect parts.	18.7
3785	♂ im	"	"	fat	Insects, some seeds, rocks	21.1

Green Valley Creek, Cordelia, Solano Co. Calif.

October 12 12 - 2 PM in order

3786	♂ im	"	Salix	fat	insects, a few seeds & greens	20.2
3787	♂ ad	"	"	very fat	seeds, several little isopods? amphipods?	21.3
3788	♀ im	"	Polygonum	fat	seeds, sm. flies, other insects	17.7
3789	♂ im	"	Salix	"	seeds, greens	20.1
3790	♂ im	"	"	"	seeds (many kinds)	21.2

Marshall, 1947

Catalog

Suisun Bay shore, mouth Sulphur Springs Creek, Solano Co. Calif.

October 12 3-4 PM.

3791	♀ad	Melopiza melodia	Scirpus campestris & Typha	fat	isopods, insect larvae, seeds	19.1 g.
3792	♀ad	"	S. acutus	very fat	winged insects, mosquito larvae seeds	20.6
3793	♂im	"	" "	" "	seeds, 1 insect, insect parts	21.5
3794	♂ad	"	" "	" "	seeds, sm. insect parts	20.8
3795	♂ad	"	Salicornia-Typha	fat	small arthropods	22.7
3796	♂im	"	Scirpus acutus	fat	seeds (a few sm insects), colored rocks	22.3

Walnut Creek, 3 mi due E Lafayette Ridge, Contra Costa Co. Calif.

in order from S to N for 1 mile along creek October 14 4:45 - 5:45

together	3797	♂ad	Melopiza melodia	Salix	little fat	seeds	19.9
	3798	♂im	"	"	fat	", insects	19.4
	3799	♂ad	"	"	"	"	21.7
	3800	♂im	"	brush pile	"	"	18.5
	3801	♀im	"	Box Elder	some fat	", lg insects	19.5
	3802	♂ad	"	" "	very "	insects, seeds (tiny parts)	21.0
	3803	♂im	"	Salix (at RR bridge)	some "	insects, seeds, greens (algae)	20.7

Tributary of Walnut Creek, 3 3/4 mi due N Las Trampas Peak, Contra Costa Co. Calif.

October 16 6-7 AM

3804	♀ad	"	Salix	little fat	seeds (grain), pts of an insect	17.5
3805	♂im	"	"	" "	seeds	18.8
3806	♀im	"	"	" "	seeds, insect larvae?	17.8

Send Lake Merced, San Mateo Co. Calif. 2-3 PM

3807	♀ad	"	Salix	some fat	seeds, pts. of a sm. insect	18.5
3808	♂im	"	Salix, blackberry	fat	seeds	17.9
3809	♀im	"	Cotula, dark	fat	seeds, sm. insects	17.5
3810	♂im	"	" "	"	" , " "?	20.5
3811	♂im	"	Salix-blackberry	some fat	seeds, sm. insects?	20.1
3812	♂ad	"	Cotula (also Typha, Rubus, Erysimum, Baccharis, sedges)	very fat	seeds	18.2+

Skyline Hiway & Mussel Rock, San Mateo Co. Calif. 4p-

Marshall, 1947

Catalog

Green Valley Creek, Cordelia, Solano Co., Calif.

October 18 8:15–9:30 AM

3813	♀ad	Melospiza melodia	Salix	fat	seeds, sm insect pts.	17.6g.
3814	♂ad	"	"-blackberry	fat	"	19.6
3815	♀im	"	"	"	", insects, greens	19.4
3816	♀im	"	Rose-blackberry	"	", some greens	18.3
3817	♀im	"	Salix	little fat	" (little black shiny ones)	18.9

mouth Tunitas Creek, San Mateo Co., Calif.

October 21 1st 2 4:30 PM; 2nd 2 5:30 PM

3818	♂ad	" (Seaside Chaparral nr. mouth)	Heracleum & Eriophyllum very fat	excessive fat	(Eriophyllum & other seeds, snails, green buds, rocks)	23.0
3819	♂ad	" (" " " ")	Eriophyllum	some fat	(Eriophyllum seeds, sm insect parts, rocks. esophagus distended & full)	20.9
3820	♂im	" (¼ mi from mouth upstream)	Comm-blackberry	fat	& seeds; stomach seeds & many rocks.	20.5
3821	♀im	" (" " " " ")	Cornus blackberry		same as above	18.5

(Total of 12 birds seen both days) Seaside Chaparral

October 24 6:30–8:30 AM another wounded here, 2 more ♂'s singing 9 AM

3822	♀im	"	Baccharis flushed from beach	very fat	(Eriophyllum seeds, larger insects)	18.1
3823	♂im	"	Eriophyllum	some fat	Several kinds of seeds (not Eriophyllum) small insects	18.9
3824	♂ad	"	"	little fat	Seeds incl Eriophyllum, sm insects & larvae	17.7
3825	♂ad	" near mouth	"	some fat	Eriophyllum & other seeds insects (1 whole one ¼", a whole Caterpillar 1") (another heard here)	19.6
3826	♀im	" near mouth	"	little fat	many kinds of seeds	17.0
3827	♀ad	"	"	fat	seeds, some green leaves	19.9

Corte Madera, Marin Co., Calif.

October 25 noon

3828	im	"	Blackberry	fat	beetles, seeds	

Miller Creek, 2½ mi W St. Vincent Station, Marin Co.

2:30–5:40 PM in order

3829	♀im	"	little live oak over creek & Typha & Polygonum & Nettle	fat	seeds, insects	18.8
3830	♂im	"	Typha	fat	seeds	19.4
3831	♂ad	"	Blackberry	some fat	seeds	18.9
3832	♂im	"	larval roots	some fat (also in Polygonum)	seeds, incl green germinating ones	19.6
3833	♂im	"	"	little fat	seeds, sm. insect parts	19.6
3834	♂ad	"	blackberry	fat	seeds	18.5

Marshall 1947

Catalog

Miller Creek, 2½ mi W St. Vincent Station, Marin Co., Calif.

October 25 ~~2:30~~ 5:40 PM

3835	♀ im	Melospiza melodia	Salix	fat?	seeds of many kinds, incl green germinating seeds	18.5
3836	♂ ad	"	"	fat?	seeds, som. insect parts	19.6
3837	♀ ad	"	"	fat?	seeds	18.4

October 31 3 PM

3838	♂ im	"	Nettles, Salix, Polygonum	fat	seeds	20.2

November 1 6:30 – 8 AM

Tomales Bay salt marsh ½ mi NW Pt Reyes Sta., Marin Co. Calif.

3839	♀ ad	"	Grindelia (mud bank at shore)	little fat	grindelia & other seeds, beetles	17.8
3840	♀ im	"	"	"	" " " " , 1 insect	17.9
3841	♀ im	"	" (mud bank at shore)	"	" " " " , " " , 1 snail	17.8
3842	♂ ad	"	Scirpus campestris 18"	"	6 sm arthropods, 4 snails, seeds	19.4
3843	♀ ad	"	Grindelia	"	many mosquito larvae, 4 snails, seeds	17.4
3844	♂ im	"	"	"	red fly, grind & other seeds	19.2
3845	♀ ad	"	"	"	many snails, 4 insect, size of sow bug, seeds	18.2
3846	♂ im	"	"	"	invertebrates, snail, seeds	20.3
3847	♀ im	"	"	some "	, snails, rocks, seeds	20.0
3848	♀ im	"	"	some "	1 ", crushed", " "	18.6

Sebastopol, Sonoma Co., Calif.

October 31 dusk

3849	♂ (im)	Otus asio	very fat	stom –	shot in orchard, mandible of Jerusalem Cricket	mounted & given to Piternick
3850	♀	"	"	"	apple orchard, Entire Jerusalem Cricket	mounted and given to Miller

Note: It was observed in this collection of song sparrows that the gonads of birds with completed skulls (ad) are larger than those in birds with undotted skulls.

Marshall, J. T.
General account
June - Aug. 1946

Marshall, Joe

General Account

June 25, 1946 — August 2, 1946

Contra Costa Co., Calif.
Monterey Co. "
Los Angeles Co. "
San Bernardino Co. "

Marshall, 1946

General Account

June 25 Redwood Peak, Contra Costa Co, Calif. afternoon. Hiked up canyon of 2nd growth redwoods from Joaquin Miller park to Redwood Park. Noted many r-b. thrushes; Cyanocitta, Junco, Purple finches. At summit of ridge where picnick grounds are spread along Skyline Blvd there are Monterey Pines & Cypresses planted. Here an olive-sided flycatcher, red-breasted nuthatches. trail SE of Redwood Peak goes out into brushland where heard a hermit thrush singing. Proved to be in a brushy gulley where a few sm redwoods (1 ft diam), madrones, buckeyes, oaks, dense brush & vines. Saw the singing ♂, another ad (while ♂ was singing), and juv in full grown plumage — all called up at various times by screech owl notes.

Trail swung around to NE side redwood nut where large 2nd growth redwoods appeared with clear forest floor except for low ferns & greenery. Here saw one Chestnut backed Chickadee, many W. Flycatchers, button vireos, bewick wrens, brush-tits. Cyanocitta noted. In deep shaded stream canyon saw a pair (one ad ♂) W. Tanagers in redwoods — high. Heard Hermit thrush alarm notes, Heard at least 2 hermit Thrushes singing, collected a

Marshall, 1946

June 25 Redwood Peak, Contra Costa Co., Calif.

(third) ♂ hermit thrush as sat on twig under clump redwoods. Creepers singing & calling in redwoods. Purple finches singing.

Thought- heard Dendroica (auduboni?) in pines along Skyline Blvd.

** Noted patch of redwoods in gully W side Mountain Blvd near Puerto Road. Many Russet-backed thrushes in them, Cynocitta & Empidonax also noted.

R-br. nuthatches not found in redwoods: only in pines & cypress.

July 19 Elkhorn Slough, Monterey Co., Calif.

Passed thru eastern regions of the slough on S.P. train & noticed much more extensive salicornia area than I suspected occurred there. Also many places where fresh-water drained down to the salicornia with tules, willows, etc.

July 20 Head of Porter St., Altadena, Los Angeles Co., Calif.

Upper Sonoran chaparral growth on alluvium of San Gabriel Mts. foothills. Poorwill country. Red larkspurs in bloom with many hummers at dusk. Saw one G. Horned Owl perched on yucca. Heard, saw, & coll. one poorwill (with slingshot) which answered my

Marshall, 1946

July 20 Altadena, LA. Co., Calif.

whistles several times. a ~~sever~~ None of the others heard or seen. This ♂ poorwill is molting. Was squatting in dust of old road thru chaparral & stayed around same area all evening until collected. Perched in places on the road all within 150 yds.

July 21 Foothills N. Altadena (Rubio Canyon Area), LA. Co. Calif.
Started same place as last night. Saw a black-chinned hummer in the larkspurs. Saw my 1st black-chinned sparrows on steep dry hills covered with Adenostoma. Slight "tsip" notes kept individuals in touch (1st 2, then more associated). As I progressed they kept above & ahead of me & more joined them. Would spend much time quietly perched on outside of large bushes in plain sight. Would scatter & forage on ground & proceed rapidly & invisibly thru the brush. One came almost to me in a steep shaded gulley - seemed to be looking for water. Approx 6 birds in this loose flock seeming to be definitely centered on brush of a steep slope above Camp Huntington. Hiked up Edison Rd. high on mt. - noticed Anthal Woodpeckers wherever a sizeable tree. Great aggregation of highly territorial & fighting hummers

Marshall, 1946

July 21 Altadena, L.A. Co., Calif.
everywhere a patch of blooming Nicotiana occured. In one slope where there was such a patch, the Anna's appeared not to forage in them much & had fixed perches under shady sumacs away from the tobacco. 4 costas & 1 ♂ Allens ~~had~~ were taken (collected on 4 each) among the tobaccos & Allens at least had definite fixed perches from the vicinity of which they would drive all others. Noted food call of juv W. Tanager high on a steep brushy slope. Noted Tanagers in the Rubio Canyon, feeding large juvs. Brown towhee common on dry steep hillsides. In Altadena proper noted abundance of W Tanagers which I have never before seen there in summer. Also noted a family of W. Bluebirds on lawns of Highland Ave. In PM called up a Screech Owl which perched on low twig & I got it to sit on the end of a stick & pulled it down level with my head before it flew. ~~Noted~~

July 24 Lone Tree Trail (Rubio watershed) to Mt. Lowe, L.A. Co. Calif.
Steep trail passes thru chaparral up S-facing slope of San Gabriels. Mostly Adenostoma 1st couple of thousand feet, then replaced by Arctostaphylos. Bewick Wren, arguing, Brown towhee throughout

Marshall 1946

July 24 Lone Tree Trail to Mt. Lowe, L.A. Co. Calif.

On N. facing slopes straggling Pseudotsuga above 2000 ft. Scrub oaks in some canyons in ravines. Several family (?) groups of Black-chinned Sparrows in lower (Adenostoma) zone. Set up owl & called scr. owl notes to attract them. A real ♂ " " answered from ravine far down mt. Kept up for over ½ hr. ~~Heard~~ this in afternoon. Also heard Pygmy Owl whistle several times from distant canyon where a few Pseudotsuga. I gave imitated calls & got many birds around incl the pair Nuttallornis. Almost on summit of 1st range found a rattler which went across trail & climbed about 3 ft up in a bush & coiled itself around the twigs. Seemed perfectly at home in the dense twiggery & glided around with ease.

At dusk heard Pygmy Owl near at hand on N side 1st ridge where numerous Pseudotsuga stand above the dense 20' high growth Canyon Live Oak. Also ♂ Screech Owl highly territorial at same place & with 2 juvs following him & uttering food calls. Horned Owl in distance hooted for a while. No other owls called up in dense Pseudots. forest

Marshall 1946

July 25 Mt Lowe to Barley Flats, Angeles Forest, L.A. Co. Calif.
in area of old Mt. Lowe Tavern.

AM at Lowe Tavern: spring attracted hummers, Arkansas goldfinches, juncos etc. Canyon Wrens singing — rocky area. Mt. Quail. Pseudotowhees: Olive-sided Flycatchers, Pewees, Chickadees, Stellar Jays, Gray Squirrels - Solitary + Warbling Vireos Band-tailed Pigeons. Townsends. Canyon Live Oaks (set up one) upper Sonoran assortment - both towhees, Wrentit, Titmouse Bewick Wren, etc. Many Anna hummers. 3rd Black-throated Gray Warblers. Prominent Association was Manzanita chaparral on S-facing slopes - Eutamias common. Saw an Empidonax on E side Mt. Lowe - exclusively dry stunted oaks & manzanita chaparral. Could have been a Wrights. (?). Olive-sided Flycatcher & Pewee the conspic. bds. all day. Everywhere where there are high perches, from 1st P. stage on up.

Barley Flats at noon. Small patch Pinus ponderosa & P. coulteri on grassy ridge. Purple Martins & Pygmy Nuthatches abundant also W. Bluebirds, Chickadees, Violet-g.? (a tree) Swallows. Called up Screech Owl in daytime & it was mobbed by White-breasted Nuthatches etc. Juncos, Clipping Sparrows common: thunderstorm this trip. One martin dove at me & mild & Townsend's in my car! Nuttall Woodpeckers found wherever one or more trees

Marshall, 1946

July 28 Chilao, San Gabriel Mts., L.A. Co., Calif.
About 6000 ft up. Large groove (about 1½–2 sq. miles in extent) P. ponderosa. Open stand on dry boulder-strewn fairly flat rolling country. Pines & Artemesia tridentata. Grey Squirrels & Eutamias & Coyote abundant. Latter howling all night & made circuit of camp. W. Bluebirds, Chipping Sparrows, Juncos, chickadees, Steller Jays, Pigmy & Wh.-br. nuthatches the predom. birds. Noted a few Incense cedars. Found no owls nor poorwills in evening. Chained several deer. Looks like favorable Otus flammeolus country but doubtless too late in season to expect them to call.

July 29–August 1 S. Fk. Santa Ana R., San Bernardino Mts., Calif.
From Jenks's Lake up Santa Ana on 29th, to Dry Lake 30th Dollar L. 31st & up to Dollar Pass, back to Santa Ana R & Dry Lake; Back to Jenks' L. on Aug 1st.
Main observation was entire lack of any breeding activity (no snow left) no birds in song except ~~a~~ rarely a fox sparrow or green-tailed towhee. Gt. movements & scattering of birds which seems to have carried many boreal birds down & many W.S & trans.

Marshall, 1946

July 29-Aug 1 S. Fk. Santa Ana R. 7000-1000 ft. San Bernardino Co. Calif.

birds up. I.e. Saw no Ruby Cr. Kinglets in boreal forests nor heard thrushes, but saw latter down in P. ponderosa belt. Pygmy Nuthatches had invaded lodgepole & limber pine forests at least to 9000 ft. Family of Wren-tits in manzanita chaparral Dry Lake 9000 ft on July 30. Cassin finches down in transition zone. Bl. Phoebe pairs 4 or 5 at Dry Lake 9000 ft. Wrights Flycatcher seemed to have forsaken the high manzanita chaparral & was found mostly with Jeffrey or Ponderosa Pine. No birds found feeding young. No evidence of any territories. Many large aggregations of birds - ~~100~~ jays chickadees & nuthatches & woodpeckers. Olive-sided Flycatchers & Pewees together ~~throughout~~ throughout — the most conspicuous bds everywhere - at least up to 10,000 ft (Dollar L. saddle where 1 of each sp. on same tree taking insects blown E across saddle).

Annotated List of Species:

Bufo common at night around Dry Lake.

Sceloporus noted

Skink saw one at 8700 ft in grass clump of meadow near Dry Lake, July 31.

Marshall, 1946

July 29-Aug 1, San Bernardino Mts., Calif (S. Fk Santa Ana R.)

Deer - head of S. Fork Dry Lake.

Gray Squirrel Common at Jenks Lake (about 7000 ft in Black Oak-Yellow Pine association. Also noted up S. Fk Santa Ana Canyon as far as 8000 ft.

Eutamias up to 9000 ft. Noted thrust at lower elev. Was common around Dry Lake. Equal nos. with Callos in S Fk. Canyon of Santa Ana.

Callospermophilus: Abundant and tame at Dollar Lake, abundant everywhere else esp. fallen logs & rocks. Seemed to go higher than Eutamias which was not seen at Dollar L. 9300 ft.

Cathartes One seen at head S. Fk. 8500 ft in "amphitheater" area. Cattle present - a dead one seen.

Accipiter Cooperi One dashed thru lodgepole & limber pines at Dry L. camp aft. of July 30. One seen dashing thru pines at head S Fk 8500 ft morning of Aug 1. Both in boreal area.

Solitary Sandpiper? Shore bird Dry Lake - evening of July 30th. Flushed from Dry Lake 9000 ft - had heard it several times - very loud, 2 noted call - tweeet tweet with rising inflection. Flew in great circles high over lake - often among Nighthawks.

Marshall, 1946

July 29 thru 1 San Bernardino Mts. Calif.

Size of Killdeer but more compact, straight longer bill. Probably Solitary Sandpiper

Band-tailed Pigeon: One noted 8,500 ft head S. Fk. Aug 1. Other single birds seen high on various occasions.

Asio otus. On evenings of July 30 & 31st in lodgepole Pine wood around Dry Lake an owl presumably of this species (size, good eyesline, no "monkey-face") followed my whenever I gave Flammeolus Owl notes. It would either perch on bare stubs near me or go in wide circles thru the timber - about 20 ft high -. On 30th when a S. Owl finally did answer this owl soon came up and frightened the Otus into silence. Apparently was familiar with this call & perhaps has been feeding on the small species. Both evenings heard food-calls of this sp. - jims probably both at edge Lake & high in the air. Imitated by downward-inflected whistle thru teeth. Must have been several birds around the lake.

Otus flammeolus. Only one answered and that only for short time. S. edge Dry Lake in pure lodgepole pine forest. Very

Marshall, 1946

July 29–Aug 1 San Bernardino Mts., Calif.

Coarse call + of triple grace note before the main call. Called about 5 min – readily answering my notes until the Asio came bursting thru the woods + scared it.

Nighthawk: Abundant + still booming in evening of 30th + 31st at Dry Lake. Fly very high. As many as 25 in air at once. Come lower as it gets dark and begin to forage thru trees and over Lake. Company of 25 or more all moving east at one time on evening of 30th.

Hummers at least Rufous + Calliope seen at head S Fork – wet meadows + willows. 8500 ft.

Dryobates villosus 8000 ft + below. S Fork Santa Ana. Juvs following parents – much noise. Generally on large dead pines! Aug 1.

Xenopicus Few seen near Jenks Lake – Yellow Pine – Black Oak association Aug 1.

Sphyrapicus varius One seen in black oak – juv. about 7500 ft. Near Jenks Lake Aug 1.

Sphyrapicus thyroideus ♀ in Lumber pines July 31 above Dollar Lake – almost 1000 ft. Started at about 5-6' on trunk. then to top, then down to another tree for

Marshall, 1946

July 29-Aug 1, San Bernardino Mts., Calif.
yds. away. ♂ juv. seen near Jenks Lake
in Yellow-Pine belt Aug 1.
Acorn Woodpecker Thruout - Yellow Pine belt
up to about 7500 ft. High on tops
yellow pines. Jenks Lake Aug 1.
Colaptes Abundant Thruout range
of Jeffrey & Yellow Pine. At least to
8000 ft.
Sayornis nigricans about 5 juvs.
at Dry Lake foraging around edges
close to water. 1 taken, prepared,
& skin destroyed by mice:
♂ juv July 30, 1946 Dry L. 9000 ft.
testes 1.7 mm. some fat, sm. dragon flies
(damsel flies) not beginning molt.
Olive-sided Flycatcher & Wood Pewee -
most conspicuous birds - everywhere
& calling. Up to 10000 ft (see
gen. acct.). I was amazed at the
abundance and scattering of these birds.
They make spectacular long insect-flight
when in steep surroundings.
Empidonax wrightii Fairly common -
usually up in pines. Thruout
Yellow Pine - Black Oak assn. (Jenks L.
up to 9500 ft in lodgepole pines
where scarce.) Apparently a downward
movement.

Marshall, 1946

July 29-Aug 1 San Bernardino Mts., Calif.

Violet Green Swallow Abundant from Dry Lake to Jenks Lake & along Santa Ana R. S Fk.

Cyanocitta: S Fk, Dry Lake, Dollar L., etc. abundant in transition & Boreal but most common " along S Fk Santa Ana where large groups of noisy inquisitive birds seen. Up to 25 individuals per group.

Nucifraga Widely scattered Jenks Lake to Dollar Lake. More seemed to be at the lower elevations in Yellow Pine.

Chickadee abundant thruout.

Red-breasted Nuthatch heard at Dry Lake (lodgepole Pines) & family group seen at S. Fk. in little patch willows (about 7500 ft.) 5 or 6 birds very noisy & chasing each other.

White-breasted Nuthatch Common throughout up to Dry Lake 9000 ft.

Creeper Up to Dry Lake area. Not common.

Pygmy Nuthatch abundant throughout in lodgepole, Yellow & Jeffrey Pines. Apparently a mass upward movement (post-breeding) into boreal.

Marshall, 1946

July 29-Aug 1 San Bernardino Mts., Calif.

Ruby-crowned Kinglet - not a trace!
Golden crowned " 2 seen in White firs
S Fk about 7800 ft July 29.
House Wren - 2 or so at Dry Lake
Wren-tit 3 seen & heard singing
2 seemed to belong to a pair in
manzanita chaparral 9000 ft Dry
Lake July 30.
V. Bluebird: Dry Lake & common below
in Yellow Pines as Horse Meadows.
Solitaire Family of juvs - about 3
seen in lodgepole grove at Dollar L.
July 31. One in White firs S Fk
1800 ft Aug 1.
Hermit Thrush. 2 only seen - These
on gnd. ~~sing~~ One in patch
willows other on gnd among
manzanitas both near Jenks Lake
in Yellow Pine belt. Post breeding
downward movement?
Lutescent Warbler - Common in
mixed flocks nuthatches chickadees
juncos etc around dry lake and
head S. Fk.
Orpheolated Warbler Feeding young in
willows head S Fk in canyon leading
to Dry L. Young have different call
from ad - more like lutescent W.

Marshall, 1946

July 29-Aug 1 San Bernardino Mts.

Audubon Warbler abundant molting
& juvs thruout up to Dolan Lake.
Common in the mixed flocks around
Dry Lake. Some seemed still to be in lodgepole
in fixed territories.
W. Tanager Common up to 8000 ft
along SFk. Seen at Dry Lake also.
Bl. Headed Grosbeaks juvs or ♀'s at
Dry Lake July 30.
Pine Siskin - conspicuous by its absence!
Carpodacus cassini found in same
places daily. Abundant in
transition zone along SFk. Not
seen much in lodgepole & limber
pines. One ad. ♂ watched quietly
sitting then hopping around on gnd.
Aug 1 under yong White firs.
Carpodacus purpureus. ~~Only at lower~~
more fat transition localities - Jenks Lake.
One same gnd as above but less
numerous. "Pit" note seems sharper
& higher than those at Berkeley.
Loxia curvirostra Dry Lake Aug 1. One
seen & heard.
Junco - abundant some must still
be nesting as judged by alarm
notes of ad. pairs seen at same
place going & coming (July 29, Aug 1).

Marshall, 1946

July 29 – Aug 1 San Bernardino Mts.

Chipping Sparrow Abundant in openings in pine forests. Dry Lake especially.

Green-tailed Towhee: Some singing early a.m. of July 31 at Dry L. Found in manzanita & chinquapin brush head of S Fk. Common.

Fox Sparrow – manzanita etc chaparral Dollar Lake, head S Fk., down to Jenks Lake. Call a sharp "chip" exactly like Brown Towhee – not at all like the "tup" of the winter birds in Bay area. Common.

Aug 2 Crocket & Pinole & Martinez, Contra Costa Co.,
On SP train noted extensive marshes "S side Suisun Bay" extending unbroken to Martinez where a good fresh-water habitat adjoins & is continuous with salt marsh. Noted large salt marsh at Crocket at base of Carquinez bridge, another at Oleum.

Marshall, J. T.
Species accounts, 1946-48

Marshall, Joe

Species Accounts

Birds

1946 – 1948

exclusive of Melospiza

Marshall, 1941

Otus flammeolus

June 16 Angeles Crest Hwy, San Gabriel Mts, LA Co. Calif.
last upper at Chilao in Yellow Pine, Coulter Pine - Arteniesia tridentata area. No Otus but many Poorwills. Later drove up highway & stopped at NW side Waterman Mt, 6600ft in a little steep canyon. 3 Otus flammeolus were found within 200 yds of car. No moon. Steep intside & granite boulders sparse occasional low patches ceonothus or Arctostaphylos spare spindly forest & widely separated Jeffrey Pine, White fir, Sugar Pine, Incense Cedar. 2 Otus call from Jeffrey Pines. Calling regularly when neared their respective territoli. Often seen to leave a tree & sail on carved ridgid wings very fast and very low to near foot of next "hooting tree" then would call from near the top & hidden in crown foliage near trunk. Must take a rapid swift & then flap way up to a perch just like a thrasher. Next AM awoke to confirm the god-forsaken nature of this rocky, dry, sparse forest which seems perfect for Otus scops. Other birds noted a couple Jays (Steller), Fair Sparrow numbers nesting in stub, Chickadees,

Marshall, 1947

Otus scops

June 16 Angeles Crest Hiway LA Co; Calif.
Juncos, Lark Sparrows etc. And Warblers.
Drove on to Buckhorn Flat situated
in broader valley with more gentle
slopes & better forest & larger
patches of Ceanothus & Arctostaphylos
these often in perfect circular areas.
Would be good place for censuses of
Otus. A stream runs thru campgrd
& is veritable oasis & paradise for
birds with willows, riparian flowers,
giant Sugar Pines, White firs & Cedars;
tall Jeffreys on dry slopes. Many
robins, Jays, juncos, verios, warblers,
Fox Sparrows, Nuthatches, White-
headed & Hairy Woodpeckers. On way
home noted that Chilao, Charlton
Flats & probably also Barley Flats
are islands of remnant pine forest
once continuous with Waterman Mt. forest
but now isolated by fires.

June 19 Walker Pass - Saw Cactus Wrens,
Scotts Orioles & Desert Sparrows in
Joshua tree forest on E side pass.
Abrupt & dramatic transition to
Pinyon - Juniper Artemesia on other
side - extend several miles down
W slope.

June 20 Big Meadow 7500' Tulare Co. Calif. Camped

Marshall 1947

Otus scops

June 20 Big Meadow, 7500 ft. Tulare Co. Calif.
in same old campgnd on rd to Buck Rock near little meadow surrounded by giant red firs & smaller lodgepoles. Jeffrey pine & brush sparse on adjacent granite slopes. In evening Robins chased a Long-eared Owl to tree over our camp. Later I looked for Otus & found 2nd, 300 yds apart. The 1st had ten incl our camp & followed me back to camp. Its headquarters were in a grove in a ravine 300 yds to N. Here I called it up again the next am in broad daylight. It hooted occasionally but never left its perch high in crown & near trunk of tall Jeffrey Pine. It was not seen & didn't fly. Other birds: Hammond flycatcher, Robin, Hermit Thrush, Willamson Sapsucker, Juncos, Audubon Warblers numerous.

June 21 Afternoon drove toward Horse Corral Mdw past Big Meadow Weaver & Boulder Creeks along N-facing slope of pure Red Fir then S- " " " of brush where saw White-throated Swifts.

June 22 Whitaker's forest, W slope Redwood Mt. Tulare Co.
In evening heard & coll a Glaucidium up same ravine where heard pygmy past.

Marshall, 1947 Glaucidium

Otus asio

June 24 Whitaker's Forest, Tulare Co., Calif.
4 responded readily to my whistles
slight inflection. Retreated far up
hill then stood its ground & began
to call then fly across me to another
perch etc mostly from 1 side
of me to the other between 2 tall
trees a Yellow Pine & White fir
Gave beside succession of evenly spaced
single slightly inflected whistles couple
seconds apart — a trill of
notes 2/sec or more & regular
note followed by 2nd at lower pitch.
Head of Otus flying or very back still light. Tape #1.
Finally call from conspic perch on top of
yellow pine where calling loudly.
Later PM went looking for Otus.
heard whole family of Strix in distance
Found 4 ~~5~~ of Otus incl tape #1
2 up above haunted house, both came ridly to imitate & calls. one
on slope above (N) creek, one
in valley of creek in public
camp in denser growth 1st time
We had them there. The 2.
by haunted house were very persistent
& one would come within 3 ft of me
in little low cedars. When calling
by itself would have single hoot.
When I would call it would

Marshall, 1947

Otus kennicottii

June 27 Whitaker's Forest, Tulare Co., Calif.

change to hoots ~~B~~ poop + ~~boots~~ & fly closer, then would get harsh & breathy & would come in steps down into the little cedar tree until within 3' - could see the bill was closed when it hooted & that the throat puffed out greatly at each note - also the tail very slightly raised each note the 2nd of would often join us, then the 1st would get still more breathy - both might stop calling & they would fly at each other chasing from twig to twig. A real battle contest. However the 2nd would always eventually be chased away & he would resume hooting night clear not from higher trees.

June 28 Down from Grizzly Ld up hwy 50 to Riverton above Placerville. Then up a dirt road to Pearmine Ridge to see virgin pine forest. On flat grd on top of ridge, or gently sloping N-facing areas were the most magnificent stands of sugar pine I've ever seen. Often 8' diam very tall. With giant

Marshall, 1947

Otis Crops

June 25 Prairie Ridge, Eldorado Co., Calif
white firs. Hermit thrushes singing
all thru this co. Here was
good soil on flat gnd. On
steeper places became rocky &
very poor forest of Yellow Pine
Incense Cedar. Drove to Jacksons
(meadow), S fork, middle fork,
Nth Fork of Silver Creek. Between
creeks was rolling country of
tremendous virgin forest no fires,
no logging great Yellow Pines
Sugar Pines, White firs, Incense Cedars,
an occasional douglas fir (very rare).
As the river valleys were reached
however, this forest would give
way abruptly to lodgepole pine
& scimpy Jeffrey Pine forest - a
few aspens. Thus the Jeffrey pine
would be found in the eroded
granite slopes of the stream valley,
& Yellow pine among the giants
of the rolling co. away from
stream valleys. Seems surely an
edaphic factor influencing the shift
Yellow Pine to Jeffrey Pine (pinile)

June 29 Nth Fk Silver Creek. Camp in lodgepole &
Jeffrey Pine by creek - few birds compared

Marshall, 1967

Thurs eve

June 29 Nth Fk Silver Creek, Eldorado Co., Calif.

to "transition forest". Only 1 limit
thrush species, Hammonds, Red-br.
sapsuckers, juncos hyppies, robins,
and. Warblers, etc. It is rather
amazing to see Jeffrey Pine forest
here on gentle s facing slopes,
& Yellow Pine White fir Sugar Pine Cedar
much higher on N facing slopes.
There is not much actual edge
around here however.

On late afternoon I drove
up canyon to Nth for 2 miles
thus being in valley running
N & S on E side of Robbs Peak.
Parked in little tr. where running
choked with azaleas in full bloom
The view up this ravine was marvelous
all the trees looking if one expect
nature yet with conical tops no
dead ones. Found Solitaires nest with
2 sitting on 3 & eggs on rd. cut
1 fr. N rd. Heard Thrushes singing,
also heard warblers. This valley
had the usual magnificent growth of
virgin forest Sugar Pine, White fir Cedar
& Yellow Pine Only 1 dog fir seen,
a giant hiked about a mile
N to summit of ridge in large

Marshall, 1947

Obs cages

June 29 Mth 7k Silver Creek Eldorado Co. Calif
Flat area inclining gradually to W where
ridges of tall manzanita crest.
Was getting Colo & Robins
pursued another long eared owl
over us — as always in these
incidents it goes at tree top
level & the forest & perches for
a minute or 2 along the way.
Later collected it from nest in
manzanita area. Went up to
this " which turned
out to be burned off forest
completely. Several Townsends
calling. Called up one nearby
several times. Sat upright on
top of dead stump & called puffing
whole body & shifting head at
each call. Also in the breeding
it gave low rapid ~~tooth~~ calls
like chuckles chuckles, but these
shorter notes than them call, more
like a purring trill. Also clapped
wings in flight — this when
I intruded close to it or when
another of pair came into tree.
Became tame & called up rattles
snake which followed us about ½ an
hour. It was headquarters was flat

June, 1947

Otus asops

June 29th 7th Silver Creek, Eldorado Co, Calif
Open yellow pine & fir forest, but
it followed us a way into the
heavy tall forest of the valley.
Poorwills in Manzanita & Black
Oak. - The poorwill was a sight
to see flying - would sail
quit a long way with wings
slightly forward, bent, & up at 45°
& on nighthawk. Also would
flutter or hover before alighting
with very deep strokes. May
fly with infrequent beat, bringing
wings back to peculiar sailing
& each time. Got one with
first sound tape. This taking
between 6700 & 6400 ft. Same
Porcupine climb up a little for
June 30 Hiked up this same valley from
camp trying for all owls in the book.
Found only 1. An Otus asops in
open forest & hillside there a lot
of black oaks - stayed high in
pines farther on, in Jeffrey pine
& black oaks heard one which
could have been the same owl.
Van Rossem has suggested that like his
Mexican Otus asio, this species may
have a great expanse of 07's - seems

Marshall, 1967

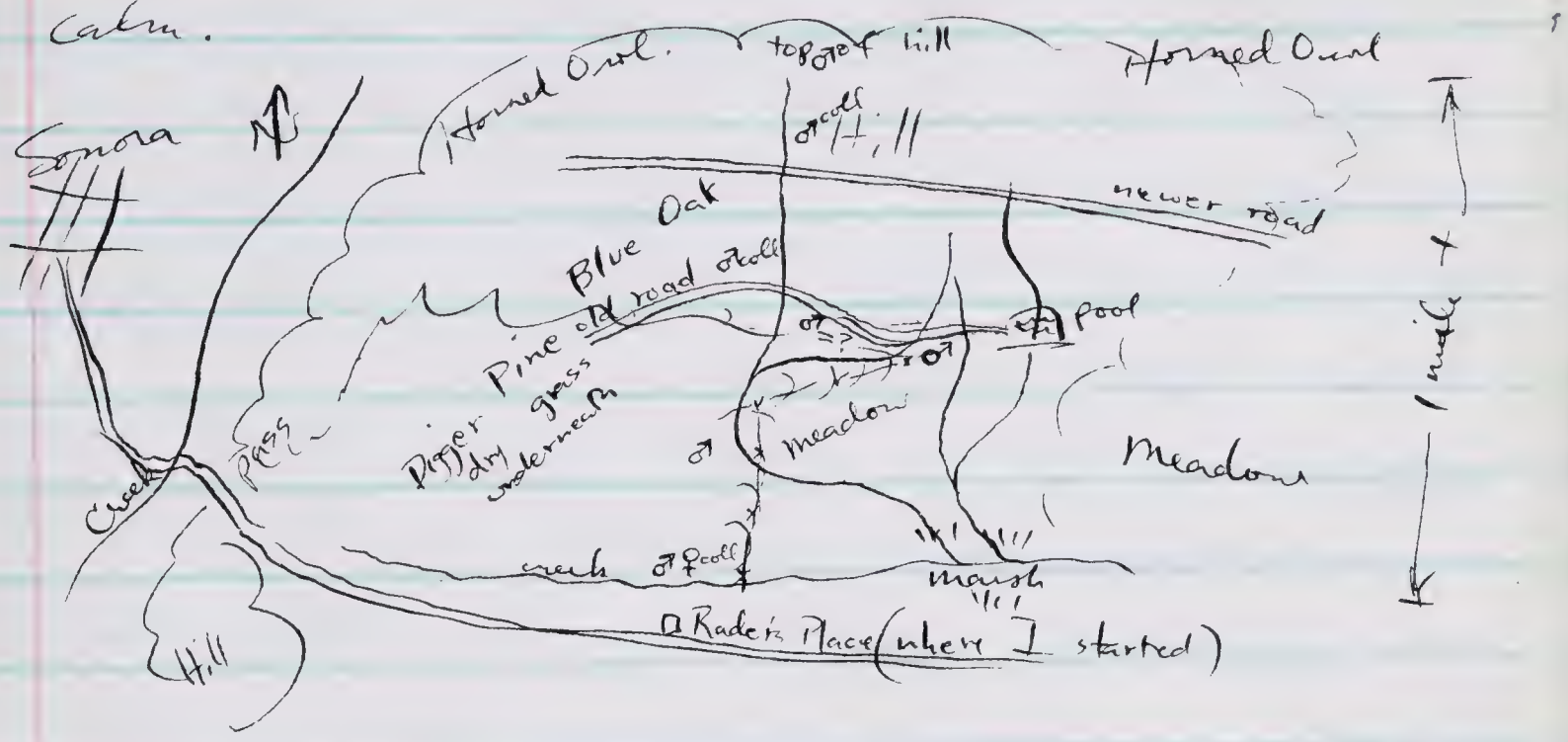
Otus scops

June 30 Robb's Peak El Dorado Co. Calif
reasonable in view of Whitaker's
& Big Meadow Observations rarity
& hearing & yet They call with
consistently when they are found
Also could accl for gt distances
covered by ♂'s their overlapping
& "territories" & their incessant
hooting. No other owls found
tonight tho much seemingly
good Jeffrey Pine co. covered.
July 1 (see Song Sparrow accl) Echo Lake,
El Dorado Co. 7500 ft. Calif. Fine
tract beautiful red fir, Sierra mixed
seen also Jeffy Pine, Wht Hemlock,
Lodgepole Pine.
July 2 Virginia Lakes Mono Co, Calif 9200 ft
drove from Lundy up here to look
for Rosy finches & conies. found now
there is no yellow Jeffy Pine seen here
at all. Joe Miller says maybe all
logged off. We go from Artemesia
straight into Pinus contorta & Salix sp
then Hemlock then timberline.
Hermit thrushes at timberline
wherever little mountain forests
no matter how stegd 20 ft
Pines & hemlocks. Rock Wrens
among rocks, Pipit Warblers in Willows.

Marshall, 1947

Otus asio

Apr 5 Sonora, Tuolumne Co., Calif.
PM hunted for owls - called Otus, Cryptoglaux.
Heard only Otus asio & Bubo. (Heard poorwills
Apr 6 midnight.) Full moon. Some clouds.
Calm.



Map of screech owls during hike thru 1 mile uniform blue oak & digger pine. 6 ters. evenly spaced.
Horned Owls heard at distance - they were on ridges.

1810

J Marshall, 1947

Phalaenoptilus

May 4 head of Strawberry Canyon, Berkeley, Alameda Co., Calif.
9-12 PM warm, clear, calm, full moon.
Parked in Claremont Canyon, hiked over ridge to upper road in Strawberry Canyon, and NE almost to foot of Grizzly Peak. None heard in Claremont Canyon at all - extensive Baccharis chaparral. About 5 in Strawberry canyon, then along upper road where roads generally N-S & then Eucalyptus. 1st, another in Eucalyp high & to S.
1st heard from Artemesia chaparral above road, 2nd (call) from dead stub of Eucalyp along road - perched on top of vertical twig, 25' high. Calling steadily. 2 more heard in tall Eucalyp at base Grizzley Peak - but far apart. One flew across road & up into Artemesia chaparral where called steadily from squatting position on flat ~~rock~~ rock - a high rock overlooking steep chaparral. Then 5 birds very widely spaced & generally calling in concert for 15-20 min then long intervals of silence when wouldn't even respond to imitated calls. 2 specimens given to Thomas Howell.

Marshall, 1946

Aëronautes saxatilis

April 10 — Life Sciences Bldg., U.C. Campus, Berkeley, Alameda Co., Calif.
One swift heard at intervals all morning.
At 1 pm watched from lawn & saw it
several times flying low and approaching
but not alighting at the Cliff Swallow
nesting ~~sights~~ sites in the eves of LSB.

April 10-12 — seen daily. Stores reports two.

Marshall, 1946

Stelgidopteryx ruficollis

May 11 Strawberry Canyon, Berkeley, Alameda Co., Calif.
two seen foraging over Strawberry pool in am. Found carrying small twigs into hole in bank 75 yds West of pool. Bank made by road excavation 8 ft high, hole apparently a gopher hole 1 ft down from top of bank. Swallows would generally fly directly into hole; once perched on a root near entrance. Would drop twig if held crosswise, or would not enter & would fly around and grasp stick by the end so that it pointed forward, so could fly directly into hole with it. Hole about 2-3" diam, too small for stick carried crosswise in mouth. Bird would sometimes drop stick even if held str. out in front. two birds went to nest - only one at a time.

Marshall, 1946

Parus rufescens

April 6 Wildcat Canyon, Contra Costa Co. Calif.
am - cloudy, cold. Saw 2 in willow growth at bottom of canyon. Several said 2 or 3 more had flushed from here before I came up. Were with loose flock of bush-tits - called occasionally, one perched on dead twig in open & sat upright there without moving for several minutes. Finally both flew across road to oak hillside and were not further seen nor heard.

April 13 Sunny clear. 4 noted in willows, poison oak, oaks along stream 100 yds S. of previous week. together. Gave confusion chaos of alarm notes - high-pitched r bush-tits - when sharp-shinned Hawk flew over.

June 25 1/4 mi NE Redwood Peak, Contra Costa Co., Calif.
One attracted by screech owl calls in redwood grove - open - with madrones & live oaks. Flew to weeds on grd while gave excited calls, then into oaks and off into redwoods. Only one seen in area.

June 29 San Leandro Creek, 1 mi NE Redwood Peak, Contra Costa Co. Calif.
Family group W side creek 100 yds S Redwood Jun. Attracted around stuffed Otus. Shot 4 with sling. In oaks & redwoods.

July 1 U.C. Campus, Berkeley, Alameda Co. Calif.
One heard & seen 11:30 AM in laurels of Strawberry Cr. W LSB.

Marshall, 1947

Barnus rufescens

Oct 18 Green Valley, 4 3/4 mi (NNW) upstream from Cordelia (BM 29), Solano Co. Calif.
A flock of about 10 was in willows of open wide stream valley here at the public picnic area & scout camp. Coll. one & gave it to E.A. Stoner to skin (Box 444 Benicia). It has rufous flanks.

Nov 27 Strawberry Canyon, North Side about 300 yds NW of Fish & Game Lab. Alameda Co. Calif.
Flock of about 4 (at least 4) foraging in tops of tall Eucalypti, in sunlight, 8 am. Sun was hitting only the tops.

Marshall, 1948

Arizona Hooded Oriole
Icterus cucullatus

June 17 U.C. Campus Berkeley Alameda Co. Calif.
9 am heard hooded oriole call (rising whistle) from tree front of Hildgard Hall. Then saw the bird fly directly overhead & alight in the eucalyptus grove - called in flight. Passed close & I saw it was ad. ♂ Arizona hooded Oriole.

There has been a (pair?) bird (at least one -) never in ad plumage, but sometimes heard singing - at my home at 2228 10th St. Berkeley thru summer of 46, 47 & 48. They hang out in large date palm a few doors to south of my house.

Marshall, 1946

Chondestes grammacus

April 20 Woolsey Canyon, NE side U.C. Campus, Berkeley, Alameda Co. Calif.
Two seen at head of S. branch of creek 50 yds. N campus boundary by cyclotron. 1st were in Buckeye at head of creek, ♂ singing. One foraged on bare ground of trail - seemed to walk, one ft at a time. ♂ sang from series of perches: the buckeye, top of acacia on campus boundary, fence post near acacia (flew to and foraged in short dry grass, some hopping, some walking picked up food with bill, didn't scratch), various baccharis bushes, willows 30 yds downstream from buckeye, etc. Gave "chunk" note often when approached in baccharis. Would sometimes sing from interior of baccharis or willow.

4.

Marshall, J. T.

Species account of

Melospiza melodia

April 1946 - June 1948

(nothing of importance has
been left in margin
or reverse of pages)

Marshall, Joe

Species account

Birds

Melospiza melodia

April 6, 1946 — June 10, 1948

pp 0.0. Index of localities

pp 0-153 Account - including
maps of collections, maps
of censuses, ecology
of song sparrows.

pp. 154 Photographs

Index to localities for Melospiza thesis

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Days in field: 21 days Oct '39 - Apr '41; 67 days April '46 - March '48 (1 day incl)

37 days Mar 29 - June 28 '47

Marshall, 1941

Melospiza melodia

April 6 Wildcat Canyon, Contra Costa Co., Calif.
Spent whole morning with 113 class
cloudy, cold. Interesting habitat
preference of Song Sparrows: Found
in 3 types: (1) Extensive willow bottoms
in wide open valley floors & along
narrow lines of willows along
streams in grassy hill areas.
In this habitat — although very
extensive in bottom of canyon — song
sparrows few & widely spaced.
Many patches of willow & brush
tangles at stream mouths where none
or only 1 singing. ~~(2)~~ Especially
widely spaced singing males along
narrow line of willows thru
grassland. few singing (2) stream bottoms thru oak
canyons. Song sparrows in poison oak
& other thickets along streams — few
and widely spaced pairs — few sing
or sing for long time. (3) Extensive
patch of wild parsley along broad top
of ridge — surrounded by grassland.
In this parsley, song sparrows abundant,
all males singing — a pair every
25–30 yards. Forage in dense young parsley, get
on dead tall stalks to sing. Many ♂'s on contg.
terr. Therefore much more singing. Comparable abundance to tule marsh single plant association

Marshall, 1946

Melospiza melodia

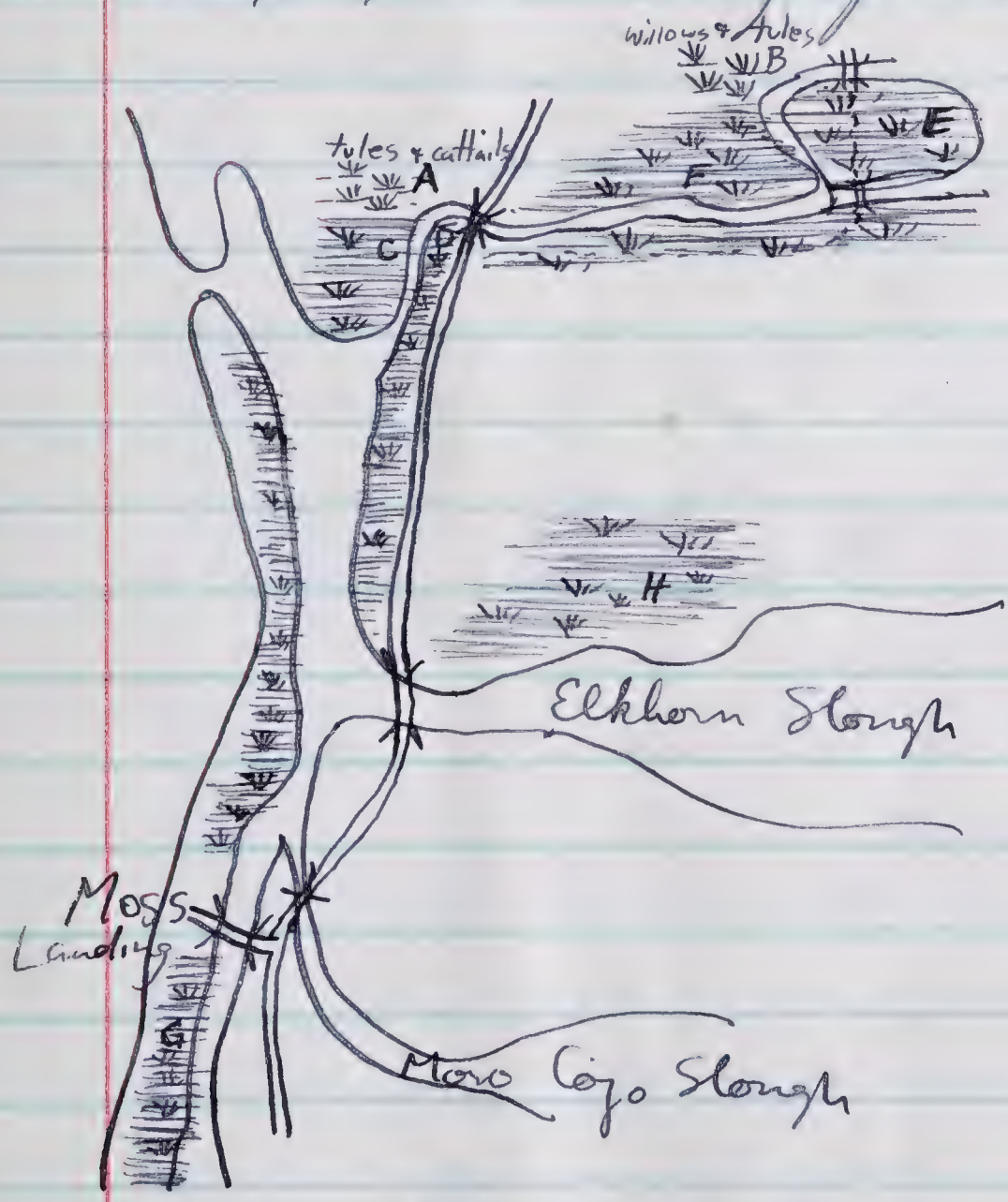
April 7 Elkhorn Slough Trip. In afternoon drove S of San Francisco on Bay Shore Highway. Guadalupe Valley has Salicornia marsh & looks like northernmost location for possible pusillula. D saw S.S. here 1940 but didn't collect any. A sparsely vegetated stream flows into upper end - might be a few pairs santaecrucis along it - but hills here dry & barren & probably few ss. approach the bay marshes in region of South San Francisco.

S. San Francisco marsh greatly restricted now. Looked like a couple of places where willows or cattail marsh approached Salicornia marsh north of Palo Alto.

Studied Elkhorn Slough area from 4-6 - windy but clear. Noted cattail marsh 1 mi S. Watsonville Junction which probably has many santaecrucis. Elkhorn slough marshes greatly drained altered or used for salt works. Moro Cojo Slough seems entirely taken over

Melospiza melodia

April 7 Elkhorn Slough, Monterey Co., Calif-
for salt drying, & no good habitat for song sparrows left. Only extensive salicornia areas on Elkhorn Slough that I saw were where Salicornia was very short - a habitat for Savannah Sparrows, but not Song Sp. Song Sparrows require deep salicornia & places where there are banks of sloughs - even feed under overhanging banks as at S San Francisco marsh.



At least a dozen pairs santaecrucis in fresh-water marsh at A - singing & active. Several singing in deep salicornia at C & D but these flushed across to gardens or fresh-water marsh at A, therefore apparently didn't have actual territories established in

Melospiza melodia

April 7 Elkhorn Slough, Monterey Co. Calif.
the Salicornia. Continued to sing from A, however (cattails) where there is a little fresh-water marsh higher than the salicornia. I was surprized to see one or 2 birds which sang for a while on tufts of salicornia, then slipped in to the ground and foraged thru the dense Salicornia growth, then finally flushed across to the fresh water marsh. Nevertheless seemed at home temporarily in the Salicornia. At E & F there was luxuriant Salicornia growth just like that inhabited by passerculus on the SF Bay - but no song sparrows - (Savannah Sparrows numerous, however). One or two Song Sparrows singing in willows & tules of fresh-water marsh at B. But here, none seen going out into the Salicornia. A & B are both very small patches of fresh water habitat which both join Salicornia marsh. Would be good place for egg..

Best Salicornia-Grindelia habitat is at G - no song sparrows - took 3 photos. No adjacent fresh-water habitat. Only Savannah Sparrows. Proves santaecrucis doesn't occur in this habitat.

Melospiza melodia

April 7 Elkhorn Slough, Monterey Co., California
Note however, that there is no salt marsh drawn on the topographic map for this spot - perhaps a new salicornia area not yet invaded.

May 5 Tomales Bay, Marin Co., Calif.
clear, warm, calm.
Mouth El Cerrito Creek & opposite Pt. Isabel (Contra Costa Co.):
Extensive tracts of deep Salicornia with Baccharis & Grindelia lining sloughs & ditches.
Good habitat.
Isabel Pt to Stege (Contra Costa Co.): Narrow line salt grass on bay side of highway. Good habitat.
Stege (Contra Costa Co.): Extensive marsh formerly tules now higher & all deep Salicornia with Baccharis & Grindelia Good Habitat.
Marin Co. San Rafael marshes now all converted into pasture.
Tomales Bay, Marin Co.: Cattail marshes & willow marshes at head of bay. Song sparrows around edge of bay on S side (slope of Inverness Ridge) in vine tangles, willows weeds, soft chaparral, & occasional patches of cattails. Investigated the salt marsh extensively between Inverness & Point Reyes Station keeping on S. side of main slough. Some sedge &

Melospiza melodia

May 5 Tomales Bay, Marin Co., Calif.
tules but mostly the marsh is a wide open area of ~~sand~~ deep Salicornia cut with meandering ditches & sloughs. Tide was out & Song Sparrows were foraging under undercut banks of the sloughs. Very abundant way out in Salicornia marsh where males spaced out 20-50 yards apart each with 2 or so fixed song perches on snags, (drift wood) fence posts, clump of bushes. Also ♂'s singing in fresh-water habitat around edge of marsh. Sibley & I conduct chase birds from Salicornia to the land - were well established as far out in the marsh as I could see & hear. Was out there about 1 hr. & saw same males in same song perches ~~bo~~ repeatedly. Generally pairs seen. Most of foraging was along undercut banks. Found one nest in salicornia tuft 3 ft from small ditch. Nest 8" off ground, in base of Salicornia 4 eggs, ♀ flushed & crept along undercut bank of ditch. This nest only 25 yds from S side of marsh. One or two birds noted flying to thickets at side marsh from immediate

Melospiza melodia

May 5 Tomales Bay Marin Co., Calif.
Salicornia area (within 20 yds) but no long flights between the 2 habitats. Sabley found ters. fixed out in the salt marsh (by chasing ♂'s). all birds were noticeably deep reddish-brown - almost chestnut - was evident because they were in brilliant sunlight. Saw several pairs of Savannah Sparrows in some of sparser Salicornia (alarm notes around nest) - Both species heard in song from center of marsh area north of main large slough. 4 or 5 pairs Song Sp. in 100 yds on one side of edge this slough.
Tomales Point Song Sparrows noted in thickets occuring within Bishop Pine forest on top of ridge where ♀ collected ♀ # 3397.
Point Reyes Song Sparrows abundant in low chaparral of Yellow Lupines on slopes facing ocean. Equally abundant as White-crowns - habitat of the 2 sp. identical here.
W. End Island #1 Solano Co: S. Sp. abundant in Salicornia & also in pure dense Baccharis on higher ground. In latter habitat noticed at least 2 pairs giving alarm notes ∴ nesting in Baccharis chaparral (sanmelis) & watched one bird foraging under baccharis.

Melospiza melodia
Journal Account

Sept 14-22 San Francisco Bay Song Sparrow Trip

The following account of Melospiza melodia covers collecting from Sept 14 - 22 and specimen nos. 3412 - 3560. It consists of locality and habitat descriptions and observations on differences in moult in different areas. It ~~shall~~ will be written by localities (alphabetically for counties, then specific localities) under each race as follows: gouldii, santaecrucis, sanmelis, mapillaris, pusillula. ~~Except for 3 races at Kenwood, Sonoma Co which~~ All localities same weather (prevailed thru this week) clear, sunny, hot, more or less wind. For specific dates on which certain localities were visited, see catalog.

Gouldii Marin Co.

Elk Valley collecting done at mouth of valley facing Pacific Ocean. Winding creek thru pasture with sparse Baccharis and patches of Juncus along it. SS. numerous here but more common up steep hillslopes on each side narrow valley in dense sea-side chaparral - poison oak, Rubus, Baccharis etc. SS common, no difficulty coll. 10 in 1 hr. ~~Indicated~~ Coll. all within 300 yds of ocean. Indicates dense big population all along sea coast in chaparral. Becomes very sparse as leave

Melospiza melodia

Sept 14-22 gouldii

coast & progress up canyons to SF Bay side. All were fully molted birds. No juviniels.
Pt. Reyes Station Collected within a mile south of the southern end of Tomales Bay in rich, heavy dense fresh-water swamp - which is an extension on Tomales Bay valley but above tide-water. Main swamps full of very tall Typha and tall round-stemmed Scirpus (californicus?) Willows around edge on higher ground then dense tall weeds & occasional Baccharis + tangles of Rubus. All plant types mentioned are high & dense, providing optimum habitat for song sparrows. Very abundant. All fully molted.
~~Solano Co~~ Napa Co.
Jameson Canyon Collected over entire extent of suitable habitat from Solano Co line 1 mile west along railroad track. Patches of willows, scattered clumps typha, but mostly tall weeds. Collected 10 birds which seemed almost to exhaust population along this very narrow stretch of habitat (bordered by dry grassland). Little water at this season. Birds numerous in dense weeds near willows. One of the 10 was an im. almost completely molted. Rest fully molted. No juviniels seen.
Sonoma Co 3 mi W Kenwood (artificial) - a lake with a few patches of typha surrounded by dry uninhabitable oak & grassland. Only 4 birds

Melospiza melodia

Sept 14-22 Goulds

seen, 3 ad, 1 juv. The juv + 2 ad. coll. by Fox. Apparently not a good habitat - too remote - because of high elevation - from any adjoining habitat. The 4 birds probably post-breeding wanderers from Sonoma Valley.

Sonoma Valley Probably sparse song sparrow populations along willow bordered streams in center of valley - as at Kenwood, Schellville. None collected. Judging from Longhurst's air observations of all other lakes & from my views, there is no place near the bay from Petaluma to Napa where dense marshland populations can be found. This vast area then is very sparsely populated + only along streams.

Santaecrucis

Alameda Co, 1½ mi N Alvarado Collected for about 1½ hrs. on E side highway #17 in extensive 1 fresh-water swamp on a tributary, but north of Alameda Creek, and within 4 miles of SF Bay. Willows, Typha and tall weeds (mostly Rumex) harbored great nos. S.S. They were not in dry Typha however. Rumex formed large stands 4-5 ft tall on dry ground + had many song sparrows. A great concentration here bounded by dry farmlands. All fully molted. A good place to look for contiguity with salt marsh.

Melospiza melodia

Sept 14-22
Santaeremis
Contra Costa Co. Canada del Cierbo locality
an artificial lake 1 mi East of
Tormey, sm village on highway 40.
Lake now dry, but surrounded by extensive
tall typha & willows at East end.
SS abundant. Of 11 birds, 2 still had
some juvenial feathers — 1 or 2 other
juvs seen. All coll. from dense tall
dry typha or adjacent Baccharis pilularis.
["Olenn Salt Marsh" see samuelis.]

Samuelis Contra Costa Co. Olenn salt marsh
This marsh is actually at Tormey, north
of Olenn. Lies between RR tracks (along
edge of bay) and 100± ft bank which
encloses a marsh of several acres
covered with low Salicornia, changing
to Typha & ~~sea~~ near bank. On
~~dog~~ slopes of bank where there is much
seepage of fresh water there are willows,
poison oak, some Juncus, Baccharis
pilularis etc. Song sparrows common
in willows & other chaparral of the
bank & go out into typha to forage,
one or 2 seen to fly out to Salicornia
but none seemed to stay there long.
Salicornia & Typha in tidal area. The salt
marsh is very small - thus it seems
correct that the birds there are really

Melospiza melodia

Sept Samuelis Contra Costa Co., Olem salt marsh
14-22

fresh-water santaeancis with headquarters mainly in willows and Baccharis at edge of the marsh. Prob. contin. pop. with "Canada del Cierbo" Marsh too small to maintain any "unswamped" samuelis. All birds in ad plumage. [I coll in mouse trap in Typha, Scirpus californicus to north.]

Marin Co. Corte Madera Creek, salt marsh at mouth.

Collected approx. 2 mi W Corte Madera at edge of SF bay (by a little hill on S side marsh at mouth Corte Madera Creek.) This marsh not contin with any suitable fresh-water habitat on entire S edge where I collected. Took birds exclusively from Grindelia bushes growing 2-3 feet high along edges of little sloughs winding thru dense Salicornia. All in ad plumage, some exceedingly worn, considering the season. Due to rubbing against Salicornia probably. The birds forage among the closely-packed stems. Very abundant.

Gallinas Creek, salt marsh at mouth

Similar in all respect to Corte Madera except there are Baccharis bushes & tall weed at the immediate edge of the marsh, where birds congregate - from the marsh. Birds exceedingly abundant. None go upland - no fresh water habitat contiguous. Coll. at a pt. on McNear's Rd approx 3 mi W Forbes ^ where power line.

Melospiza melodia

Sept 14-22 Additions to Marin Co: Some salt marshes rapidly reestablished along San Pedro Road, East of San Rafael; Song Sparrows seen in them. Salicornia & Grindelia, some tules.

Sausalito Marin Co, Richardson Bay salt marsh.

This marsh, by the old electric power house 1½± mi East of Mill Valley. Marsh is of Salicornia type tidal, with thickets of low Grindelia along the sloughs. An extensive population of song sparrows here, but the birds do not exceed around the edge of the marsh, & their population is doubtless continuous with sparse birds on moist north-facing slopes & willows in the vicinity. But anyway these birds are not mere visitors to the marsh - they are permanently established there & forage, sing etc in the Salicornia & Grindelia. Is a game refuge & I tried to get birds with Monotraps - got 2 with 38 traps set at bases of prominent grindelias. Could have gotten more by resetting around a old bridge which was HQ for ~~to~~ about 5 or 6 bds."

Solano Co. "vast" extensive tracts of Typha & Salicornia noted on E. bank Napa R covering much flat land on north outskirts of Vallejo to West of highway #29. Possible contiguity with fresh-H₂O habitat such as Lake Chabot.

Sonoma Co. salt marsh mouth Petaluma Creek. Collected on side of Petaluma Creek opposite

Marshall, 1946

Sanmelis. Melospiza melodia

Sept Sonoma Co. mouth Petaluma Creek.
14-22.

(north-east of) Grandview (Black Point Station) on the east end of bridge of highway #37 across Petaluma Creek. Petaluma slough here has area of rich tall Salicornia & partly submerged 3 angled Scirpus (low) & other salt grass, then a levee with much Baccharis pilularis. Song Sparrows forage, sing & spend time in Salicornia & occasionally come up to Baccharis when squeaked at. Very abundant. All in fresh fall plumage.

5-6 mi S Schellville, Sonoma Co noted, on bay side of highway #37, vast rich tracts of Salicornia & Tules.

Mapillaris Contra Costa Co Tule & Bullrush marshes wide and appear continuous from 1 mile or so West of Martinez east all the way to Antioch, where they end abruptly, due to steep river banks at that point. West of Martinez, there is continuity with upland habitat on the wooded hills there with moist north-facing slopes which rise out of the marshes. Marshes especially extensive around Avon, where a tremendous population exists. Tried to collect in extensive tule area West of Antioch, but found it dry, & SS absent (heard along sloughs only).

2½ mi W Pittsburg Mallard Slough drove toward bay from hiway #4-24 to a water company pumping station.

Melospiza melodia

Sept 14-22 maxillaris, Contra Costa Co, 2½ mi W Pittsburg, (Calif.)

From here north ran a levee covered with Baccharis pilularis & extensive Rose thickets. On sides of levee were tracts of typha, some rich Salicornia, a few willows and tracts of Scirpus californicus. Song sparrows avoided Salicornia and Rose thickets which (latter) appear too dense & dark. Were abundant in typha & Scirpus. Some juvinals seen. Maxillaris appears to differ markedly from pusillula & gamelis in that it does not forage in Salicornia but stays in the tules & [grindelia as at Southampton] even tho these bordered by extensive areas of Salicornia.

Solano Co, Cordelia Slough. Collected on Cordelia Slough at a point where it comes within 100 yds of highway 21, about 9 mi N Benicia. Here was an extensive tidal growth of 3-angled Scirpus with no Salicornia (same for low Salicornia) Song Sparrows, then a slough bordered by Scirpus californicus & Typha with occasional tall weeds, rose & poison oak thickets. S.S. restricted to Typha & Scirpus when abundant. Many juvinales and partly molted birds seen and collected. Run into whole (family?) groups of juvinales. Some molting birds have grey cast apparently from fragmenting follicles.

Melospiza melodia

Sept 4-22 Napillaris, Solano Co, Southampton Bay salt marsh
Collected at 2 pts in the marsh. 1st at east side or edge of bay, ~~but~~ tidal, Salicornia too low for SS. which occurred only in tall Scirpus ~~californicus~~ acutus & Typha. Not numerous. 2 bds taken - oily on plumage. None in extensive tract 3-angled low Scirpus. 2nd pt: at north end of marsh near bayway & near a dump where deep Salicornia cut by sloughs bordered by tall thickets Grindelia & some Baccharis. Some tules in the sloughs. SS. abundant but only in these last 3 plants - did forage in mud under overhanging banks of sloughs as they do in Marin Co (samuelis) and pusillula (Bay Farm). Did not forage in Salicornia. All bds fully molted.

Pusillula Alameda Co San Leandro Bay salt marsh.
Collected on north side of Hegenberger Rd opposite point where joined by "Road No. 1". Song Sparrows abundant. One pure juvinile seen. Habitat mainly luxuriant tall (more than 1 ft. high) Salicornia in which birds fraged - also under overhanging mud banks of sloughs. From these forage areas, birds would congregate in loose groups in large Baccharis pluteris & Grindelia thickets on slightly higher ground. All 10 bds collected were fully molted. Forage by flying to slough bank, or to Grindelia where light, then drop to ground.

Melospiza melodia

Pusillula

Sept 14-22 San Mateo Co Ravenswood Point.

Collected on west end of Dumbarton Bridge. Most birds shot from fence or Baccharis or Grindelia bushes along bridge approach. However, the normal habitat was in the Grindelias which lined the little sloughs coursing thru the extensive areas of moderately developed Salicornia. As at Gallinas Cr, Corte Madera Cr, Richardson Bay, San Leandro Bay, the birds forage by flying to a Grindelia bush, hopping down thru the bush to the ground, then working across - like thru the dense Salicornia for as much as 25-30 yards. I.e. - a bird will be flushed from one Salicornia far from the Grindelia bush where it started. This is in contrast to Petaluma Creek, where Salicornia is 2 or more ft high & serves as an all-around habitat. Also contrasted to all Suisun Bay marshes where birds forage at bases of tules on wet ground or Grindelia on dry ground, but not in Salicornia. In other words, in Salicornia-Grindelia marshes in range of Sanmelos & pusillula, the " serve as important starting places for foraging & for song & call perches. + + + Elsewhere in San Mateo Co: great reduction of S. San Francisco salt marsh by airport. A small patch of Salicornia & Typha north of S.S.F. with a few birds in Typha only!

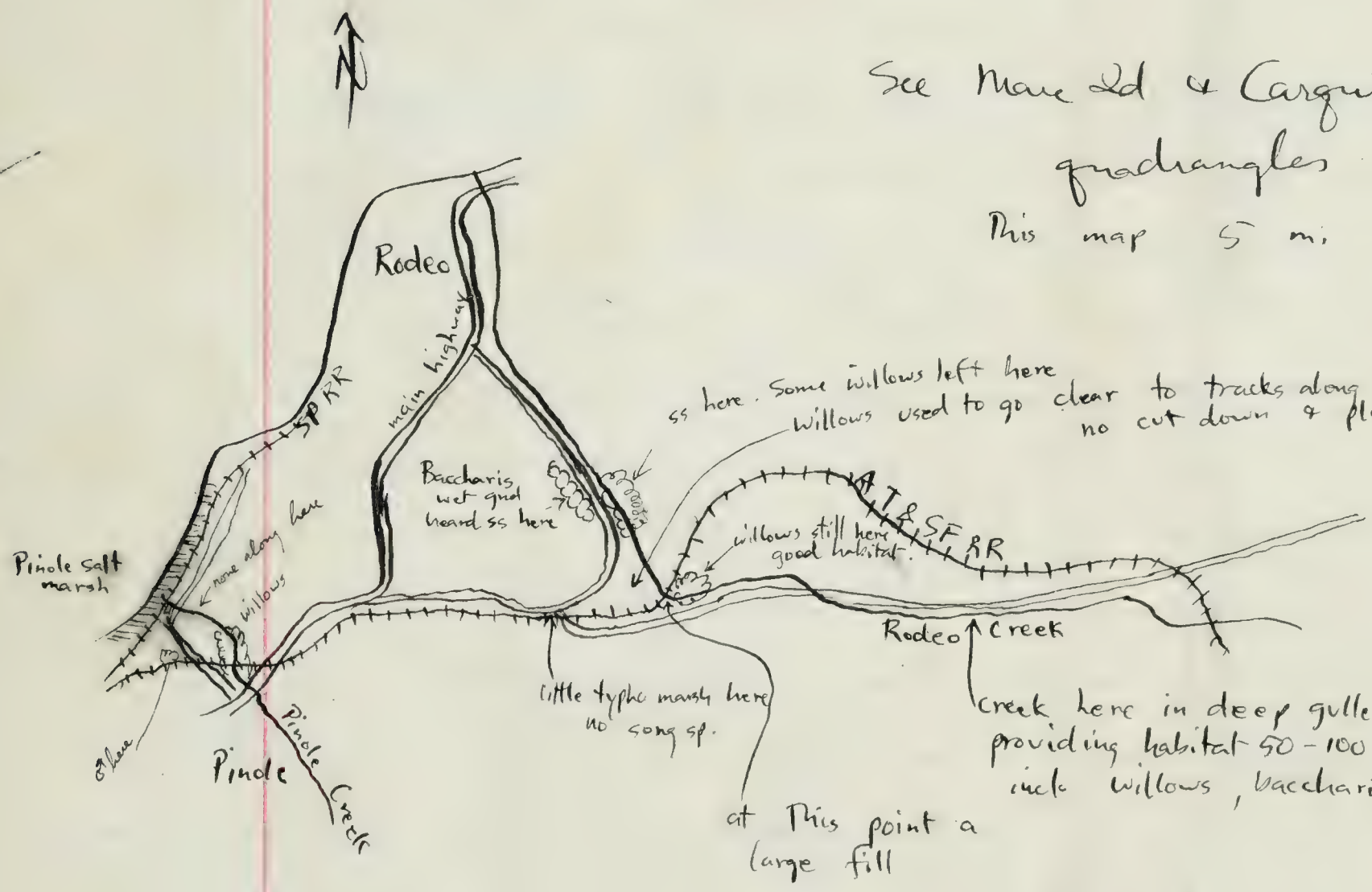
* Marshall, 1947 — Note: for "Scirpus microcarpus" read Scirpus californicus all thru these 17. notes.

Melospiza melodia — Jan. - July 23 '47

Mar 29 Pinole salt marsh, Contra Costa Co., Calif.

Several (3) early morning censuses made - see accompanying map.

Rodeo Creek, Contra Costa Co., Calif. Windy, cloudy some rain no song sparrows heard in willows along creek.


N
See Mare Id & Carquinez quadrangles
This map 5 mi. wide
Rodeo
main highway
SP RR
Baccharis wet grnd heard ss here
ss here. Some willows left here
willows used to go clear to tracks along creek no cut down & plowed.
A T & SF RR
willows still here good habitat.
Pinole salt marsh
none along here
willows
Rodeo Creek
Little typha marsh here no song sp.
Creek here in deep gulley providing habitat 50 - 100 yds wide incl. willows, baccharis, etc.
Pinole
Pinole Creek
at this point a large fill

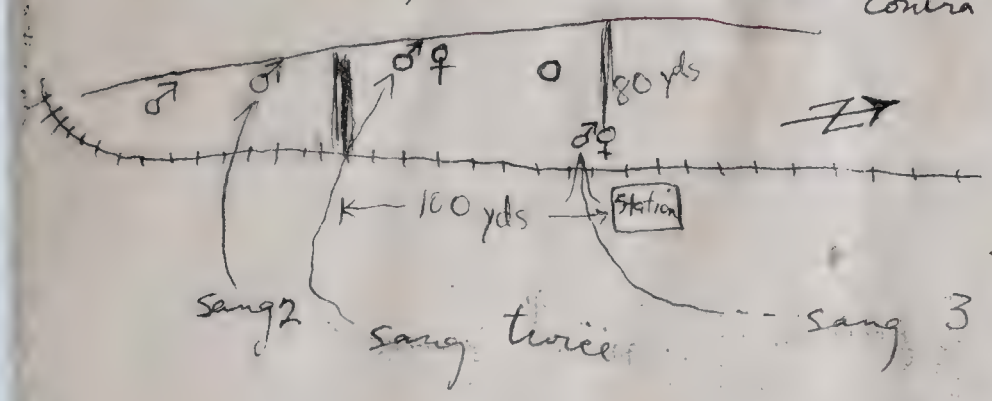
April 11 Southampton Bay, Solano Co., Calif. (& Napa Co. Calif.)

Count of singing ♂'s made - covered half of marsh (see accompanying map), up to start of Grindelia. In lower (S) half, ss restricted to Scirpus along bay front & narrow scirpus along sloughs. Not in salicornia.

Later went to mouth Carneros Cr. (Cuttings wharf) SS go only 100 yds up mouth where there is Salicornia - farther up is baccharis. Saw white-tailed kite. Bull Id. looks like has baccharis habitat only around edge.

Melospiza melodia

March 29, 1947 Pinole Salt Marsh
Contra Costa Co., Calif.
1st Count A

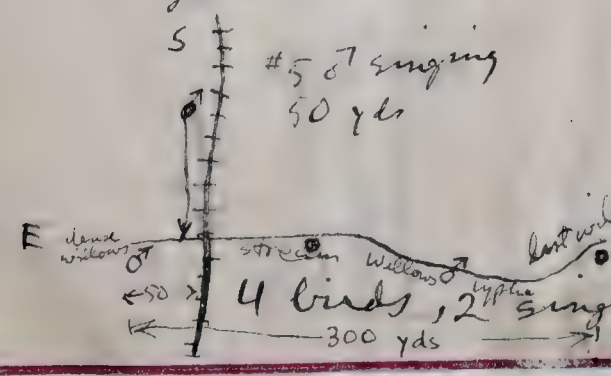


5:55 — 6:15

cloudy, short-eared owl present.
Little singing

About 16 birds between
station & S. end
♂'s singing only
about 10 min

2nd Count:
This count made
20 min from
6:25 — 6:45 AM.



April 11, 1947
11:30 AM

Southampton Bay
Solano Co., Calif.

B

None probable on N of highway

clear, calm, hot.

Scirpus along all sloughs in lower half, 2-5 yds wide
also solid on front of bay
shown by dotted line =
boundary between
Scirpus & Salicornia

1 PM
about

hill

finished here at

Singing ♂'s

→ Grindelia along sloughs
much less
Scirpus

no Grindelia

Salicornia

Airport

None found in Benicia except ~~in~~ possibly in salt marsh & Benicia Ferry.

deep salicornia

salicornia

short salicornia

power lines

all stopped singing

Scirpus fluviatilis & californicus

weeds

15th St

Eucalyptus

Spencer

I started here

Heleospiza

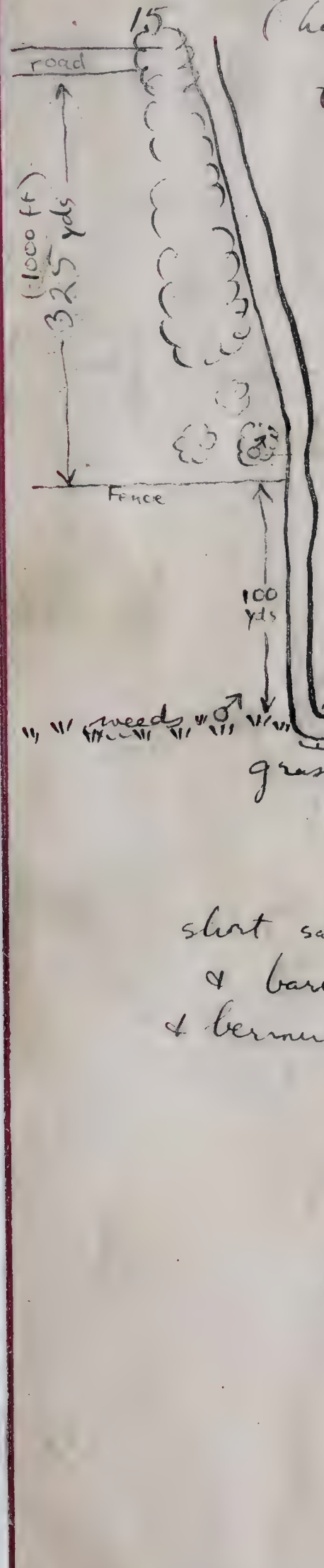
April 11 Sonoma Creek mouth, Sonoma Co., Calif.
Stopped at Sonoma creek on road from Napa past Schellville. Willows & Typha & weeds along creek altho heavily grazed. Last willows 200 yds S of road. 4 song sparrows seen - large & brown. Must be last birds before salt habitat.

Apr 12-19 San Pablo marsh Contra Costa Co., Calif.
See accompanying maps. All made by fast travel & noted singing ♂'s or birds flushed. Also noted: 3 ♂ & 2 ♀ marsh hawks; ♀'s brooding; Mallards (nesting) Rails (Clapper); Tule Wrens - carrying nest material, Savannah Sparrows in short Salicornia & grass, Red wings in Typha.

Maps show large pop. as in last willows of both Wildcat & San Pablo creeks; these being continuous over 200 yds or so then a single series of pairs to large pop in Grindelia, Salicornia, Spartina. Good junction of 2 racial habitats.

April 11 West Island #1, Solano Co. Calif.
Song Sparrows abundant in Scirpus but absent from baccharis. Some perch & sing from edge of baccharis only; fly back to "tules". Not in Salicornia there, which is not extensive. Coll. 3 with sling - 3565, 3566, 3567.

April 12, 1947 San Pablo marsh C.
Contra Costa Co. Calif.
mouth Wildcat Creek



(head 13) ♂'s in willows from road to end willows at west.

100 yds W, then 1 in weeds & 1 in Salicornia of slough in hearing of last willow ♂.

— last ♂ in willows.

Song Sparrows would be abundant all around here if it weren't for the oil.

= no birds out here; sloughs oily.

copy Marshall, 1947 I.

San Pablo marsh, Contra Costa Co., Calif.
April 13 7 AM clear

from rough sketch for N part

Spartina at this season is dead & brown.
New green stuff about 1 foot high now - concealed.
Salicornia is green
Grindelia is in leaf.

Salicornia does not grow on banks of sloughs here;

is thus:

[Note (1987): For orientation of this map, please see page 33 and page 133

Marshall, 1947 II

copy

San Pablo marsh
April 13

from
rough sketch for
N part

copy

Marshall 1937 III

San Pablo marsh

April 13

N

from rough sketch for
N part

copy: Marshall, 1947 IV

N

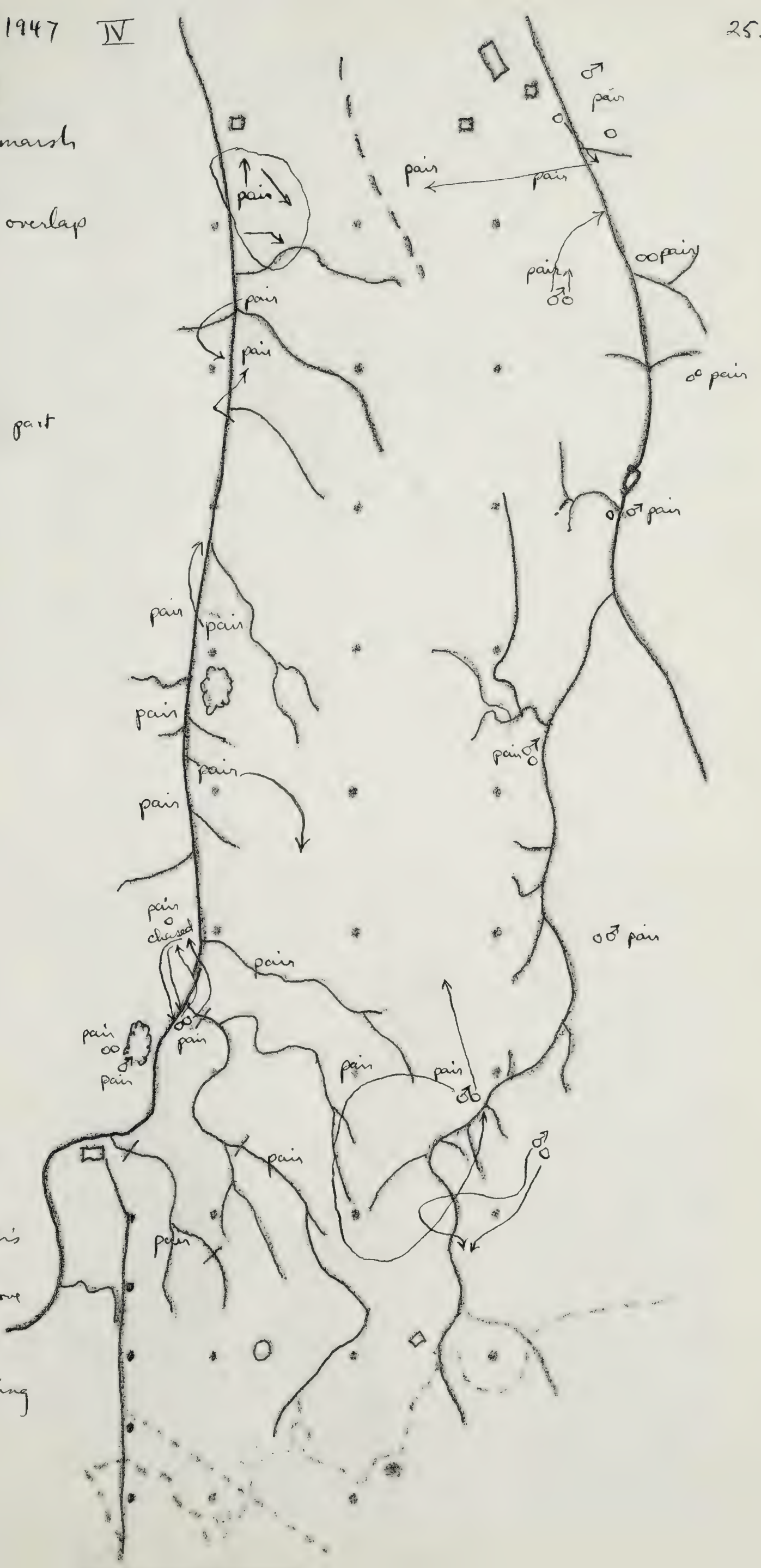
San Pablo marsh
April 13

no overlap

Accurate for N part

from very rough sketch for S part not accurate

more small sloughs at this end with Salicornia alone banks ∴ more pairs more wandering


pair
pair
pair

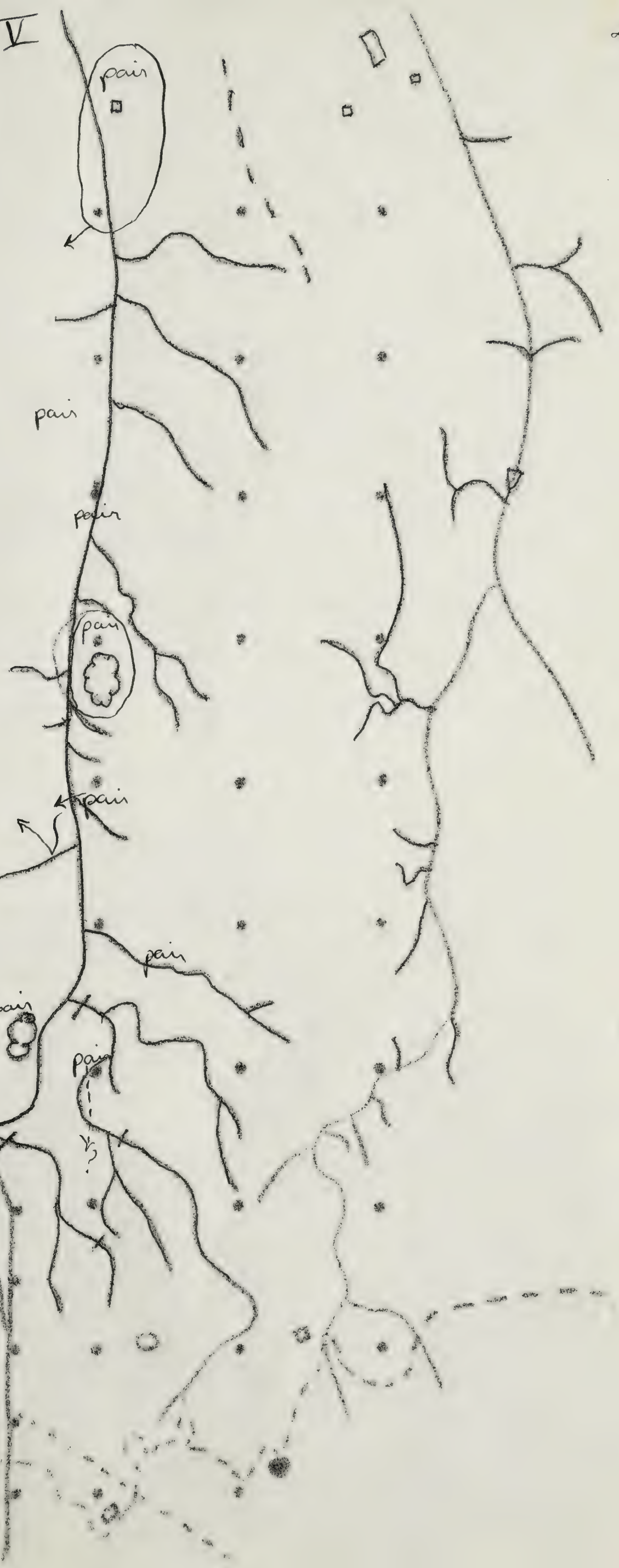
copy

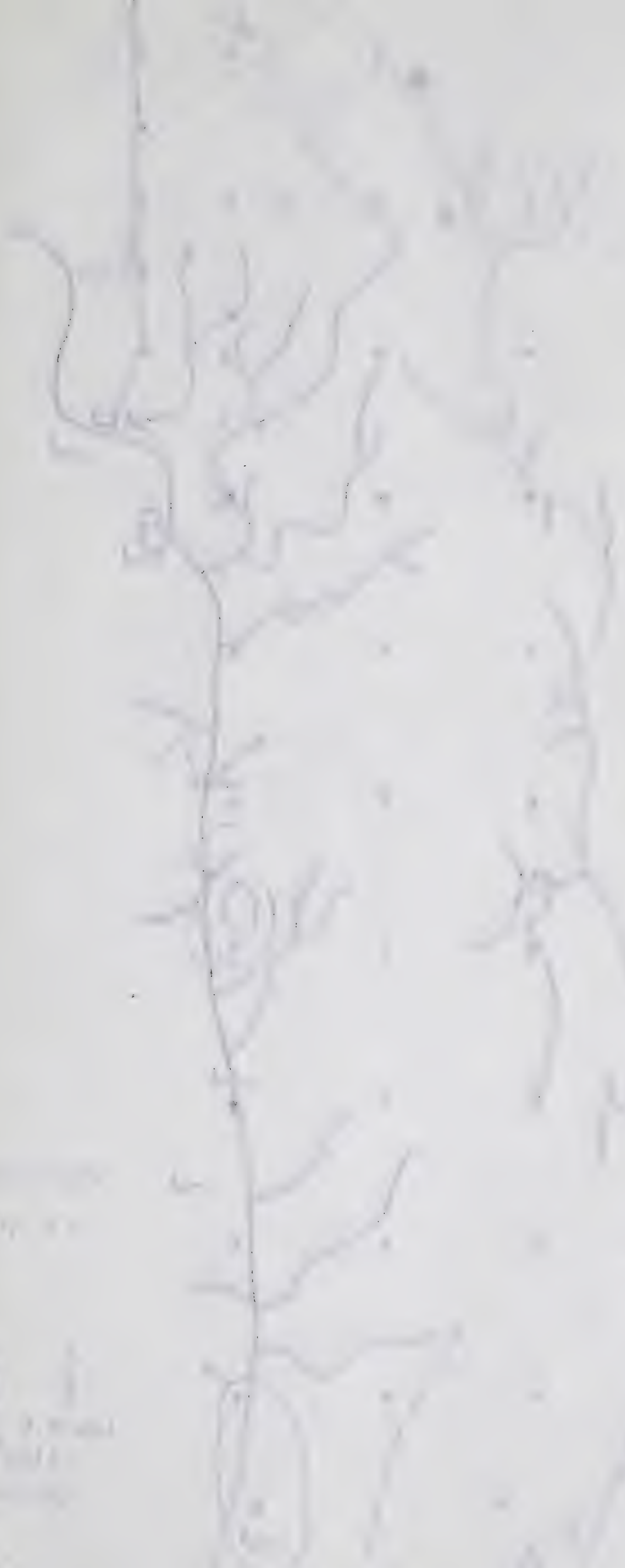
Marshall, 1947 V

San Pablo marsh
April 13, 1947
9:15 - 9:30 AM

N

from sketch of
N part of W slough
only





Marshall, 1947

VI

N

San Pablo marsh
April 14 7AM
high tide ∴ birds not
so close to sloughs

(from rough sketch
accurate only for
N part)

ush Hawk 3 eggs, Marsh Hawk
Mallard 10 eggs, Mallard

fm Marshall, 1947 VII-VIII

from accurate double sized maps

San Pablo marsh
April 15
5:40-6:55 PM

N

Dusk
At 6:55 still singing but under cover - can't see them nor tell direction precisely are close to ground

South wind; clear
low tide

Mallard 11 eggs
♀ away feeding
eggs covered with thick layer of feathers
very warm.

flushed

overlap here

tic

tic (tic seen later)

overlap

tic

Marshall, 1947 IX-X

opy
from accurate maps)

San Pablo marsh

April 16
7-8:30AM
clear, cold, south wind
medium tide

wheeze

tic

alarm

tic

tic

Marshall, 1947

San Pablo Marsh XI
Contra Costa Co., Calif
April 18, 1947
7:15–10AM

tide out-coming in

warm, clear, calm

6 seen at one

(30)

N

singing

wheeze

alarm

pair here

2 pairs here

alarm

same time

alarm

fight

fighting

flight song

This area covered twice

young

tie

Marsh Hawk
4 eggs
near flying alarm

then both over to Grindelia

Mallard 11 eggs Age 15

Marshall 1947
San Pablo marsh

April XII 19
5:50–6:30
AM
sun just up
clear, calm
tide out
Rails all
calling

April 19

Rail

alarm

last pair

tsip

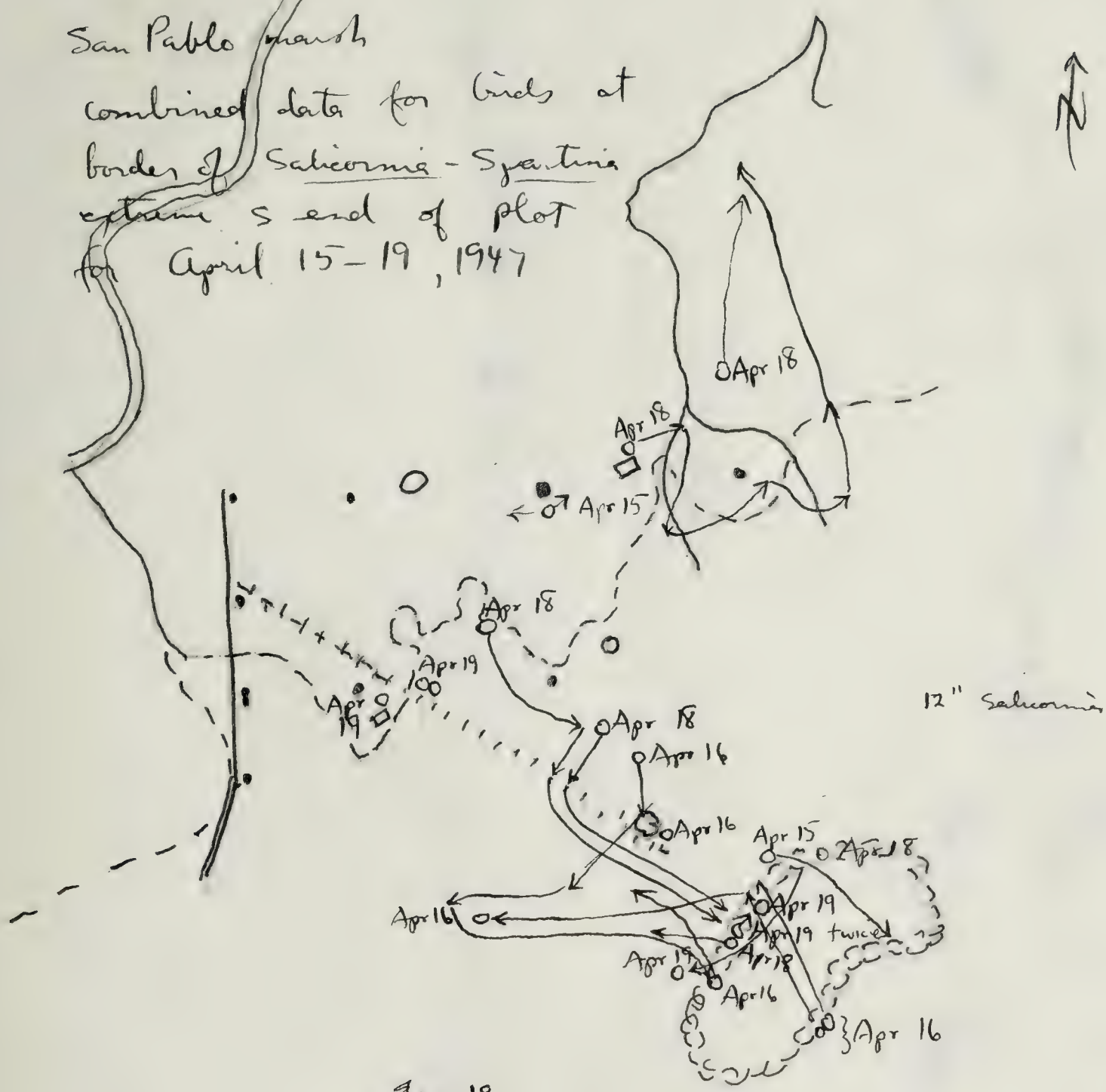
alarm

♂? same ♀?

30 yds wide

Marshall, 1947

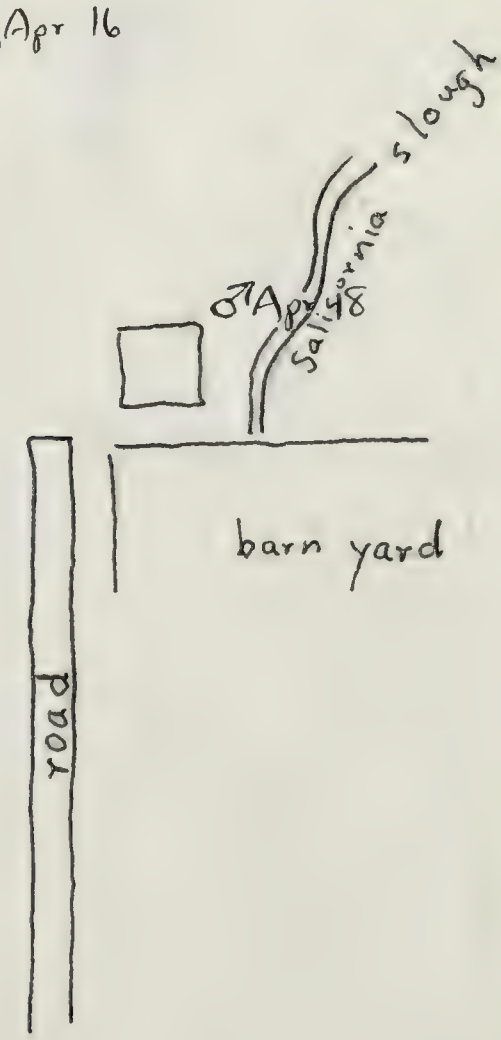
San Pablo marsh
combined data for birds at
borders of Salicornia - Spartina
extreme S end of plot
for April 15–19, 1947

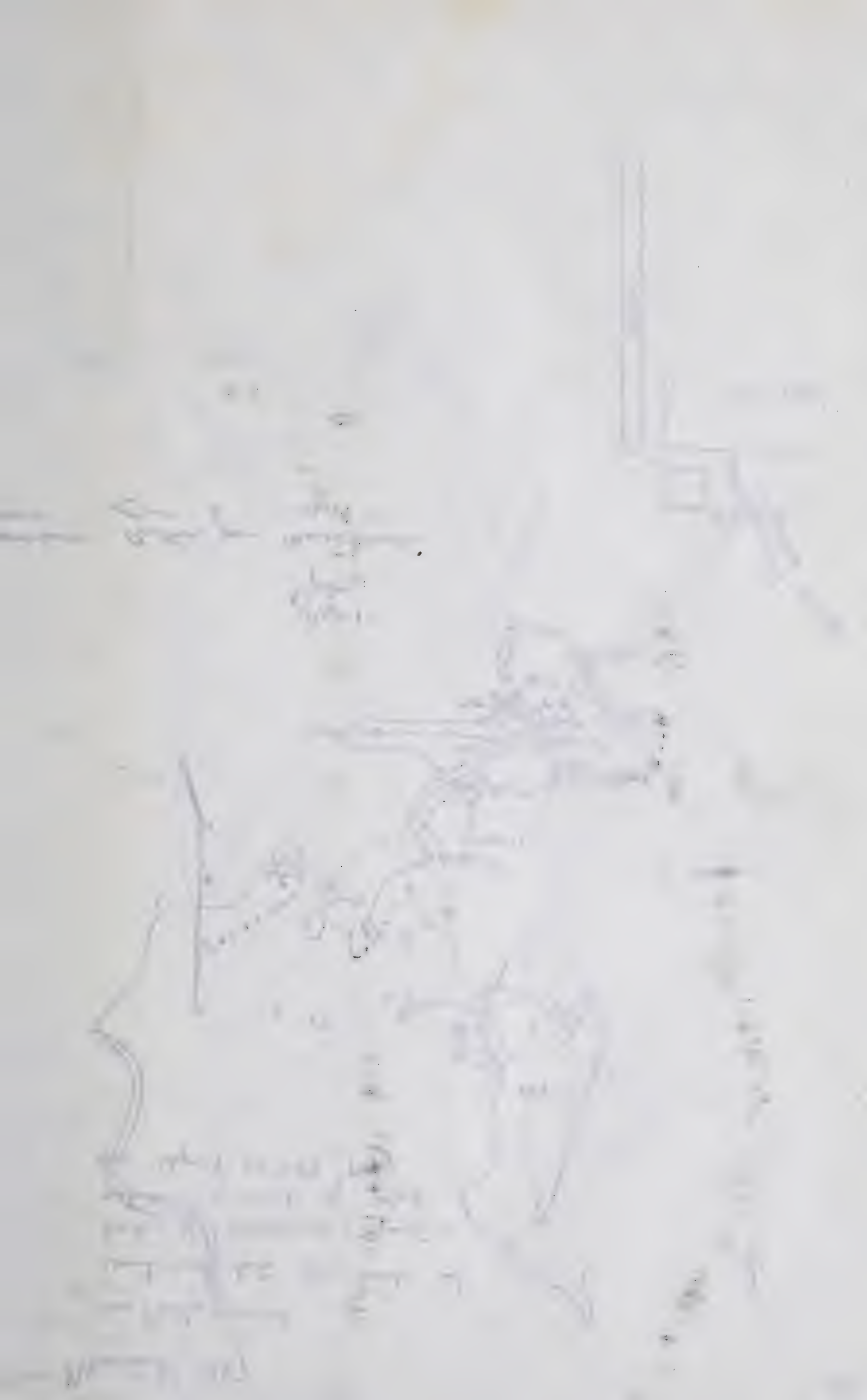


♂Apr 19
pole

~~pair marsh hawks~~
~~Apr 15~~

Another pair Marsh Hawks
apr 15





Marshall 1947

Sample Plot

San Pablo marsh

Contra Costa Co., Calif

April 13–19

1 mm = 2½ yds

Bay ↑

This gone June 1
1 ♂ marsh Hawk
← here June 1
33.

47"

45"

Spartina foliosa

~~per half culture~~
~~of April 15–18~~

Upper half = culture of Apr 15-18

"Weeds 4 inches high"

40"

36-40" Spartina

Grindelia

slough 5 yds wide

24" Salicornia

weeds 4"

~~half~~
~~ure of~~
~~ril 14~~

Lower half culture of Apr 14

12" Salicornia

Spartina

33"

14" Salicornia

some grass

dump

--- = grass-choked slough

— water slough

--- boundary of Salicornia

= Salicornia

= Grindelia

• = stake

□ = sign

▭ = boards

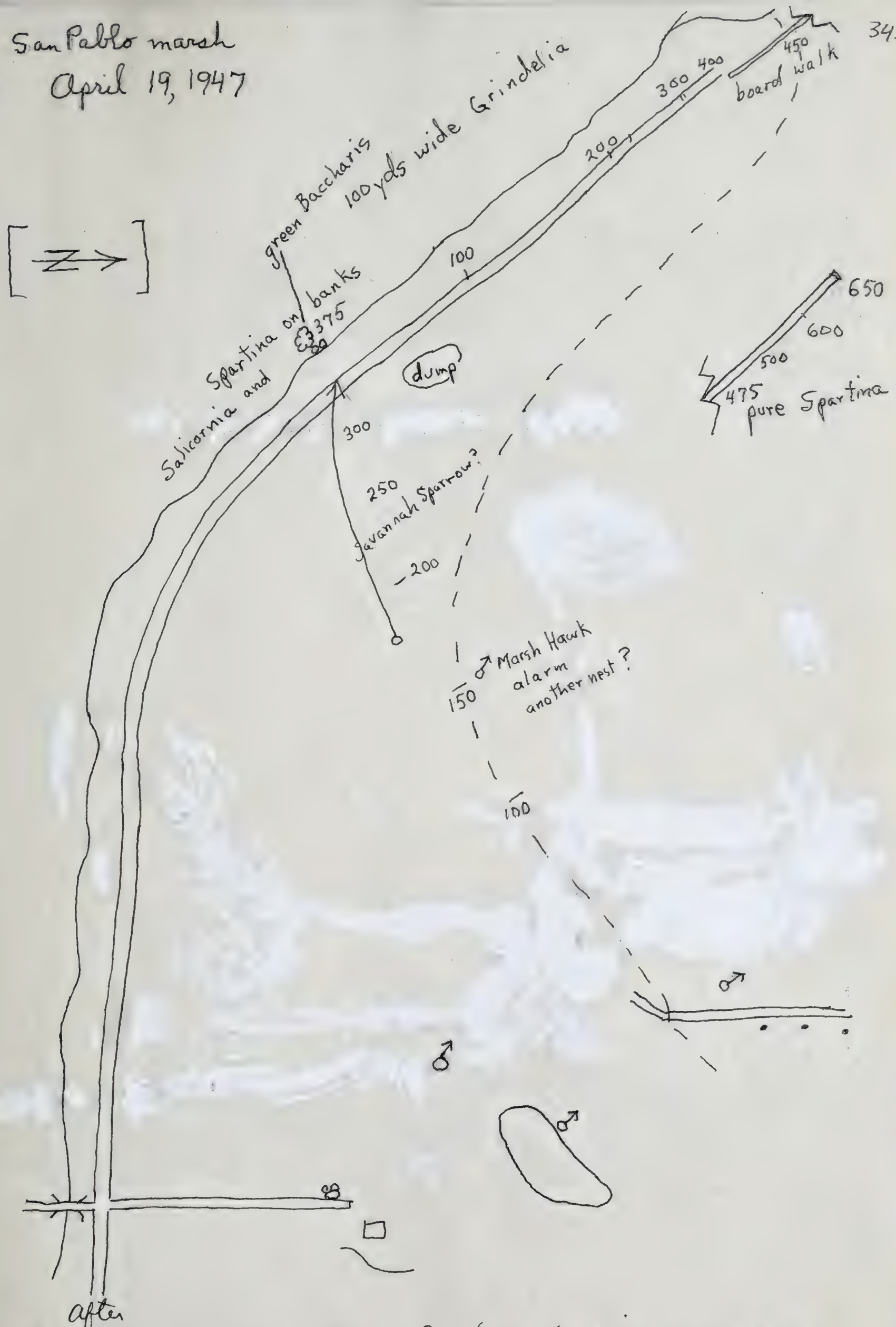
// bridge

100 yds to end road is last road to cross San Pablo Creek

orientation of map

San Pablo marsh

XIII April 19, 1947



After the survey on next page, I drove to Richmond Hill (S. end) & found a marsh of SS Habitat on wet gnd in NE facing lower slopes still OK. Much Juncus, tall grass, teale, baccharis & SS numerous. 1 family of juviniles seen tails ½ grown out. No. Salicornia habitat remains. "Slough S side Richmond" ~~(Slough S side Richmond)~~ still exists as shown on back:

"Slough S side Richmond"

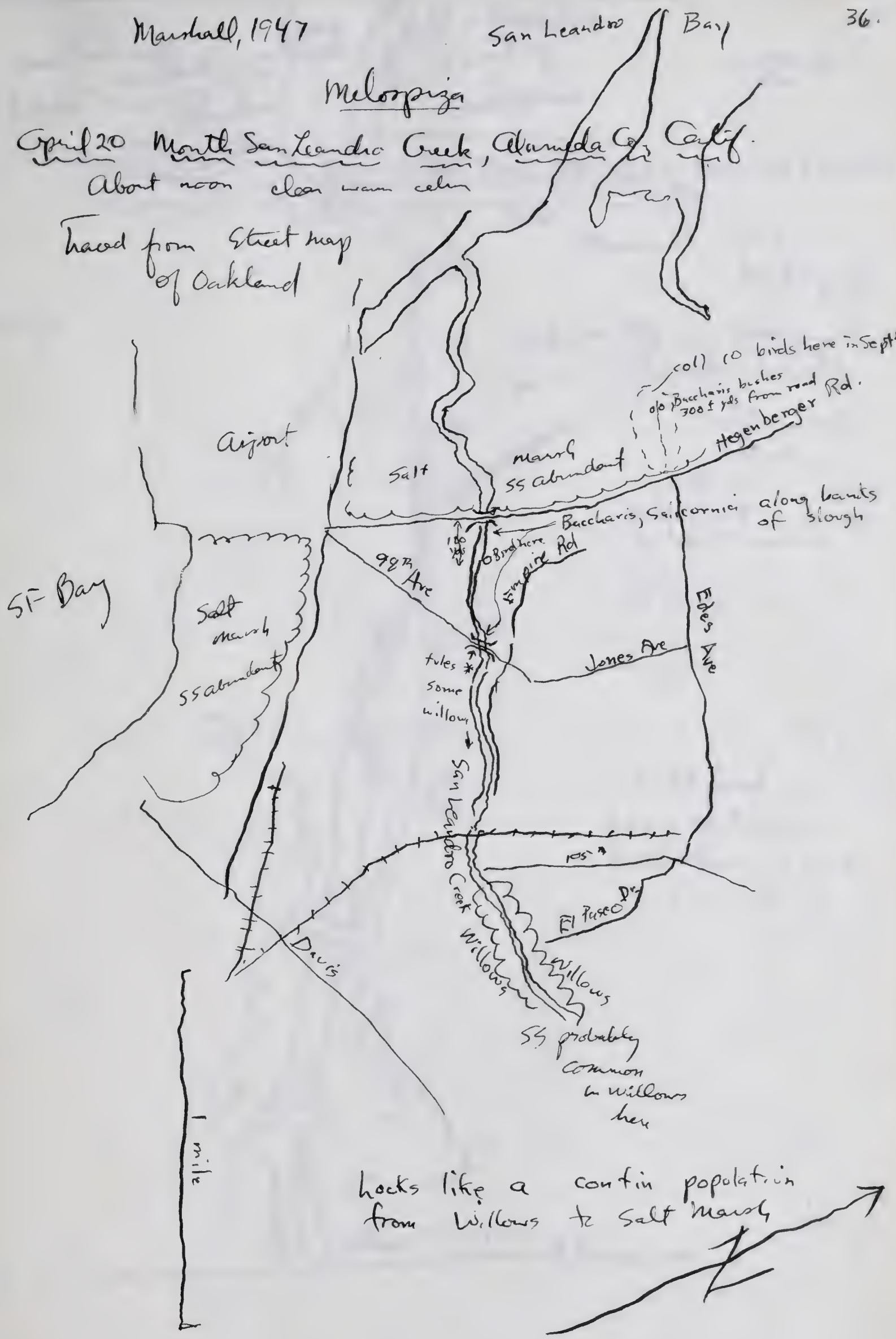
XIV San Pablo marsh
April 19, 1947 7:15 – 7:45

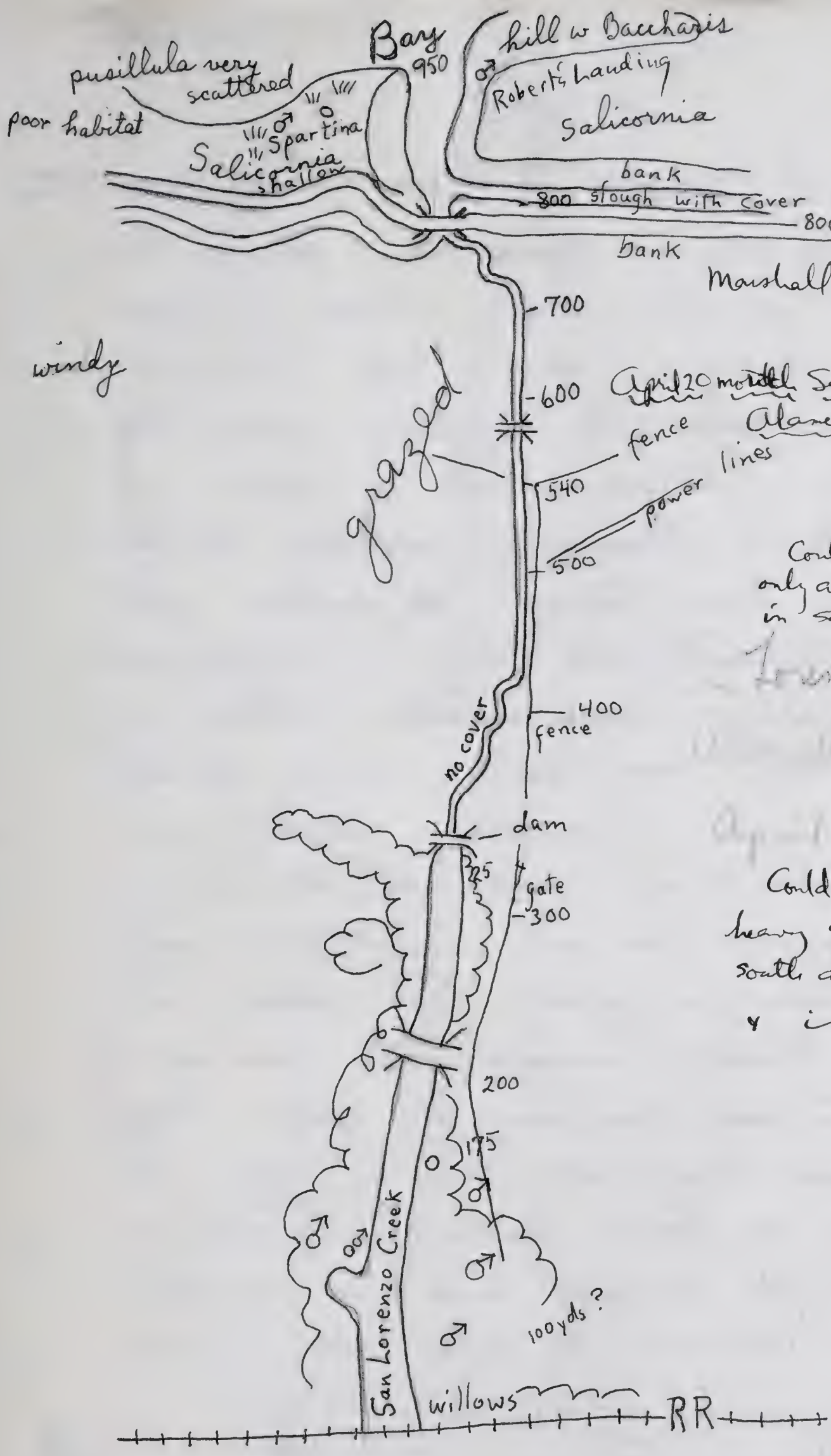
Marshall, 1947

Melospiza

April 20 Mouth San Leandro Creek, Alameda Co. Calif.
About noon clear warm calm

Traced from Street map of Oakland





Marshall, 1947

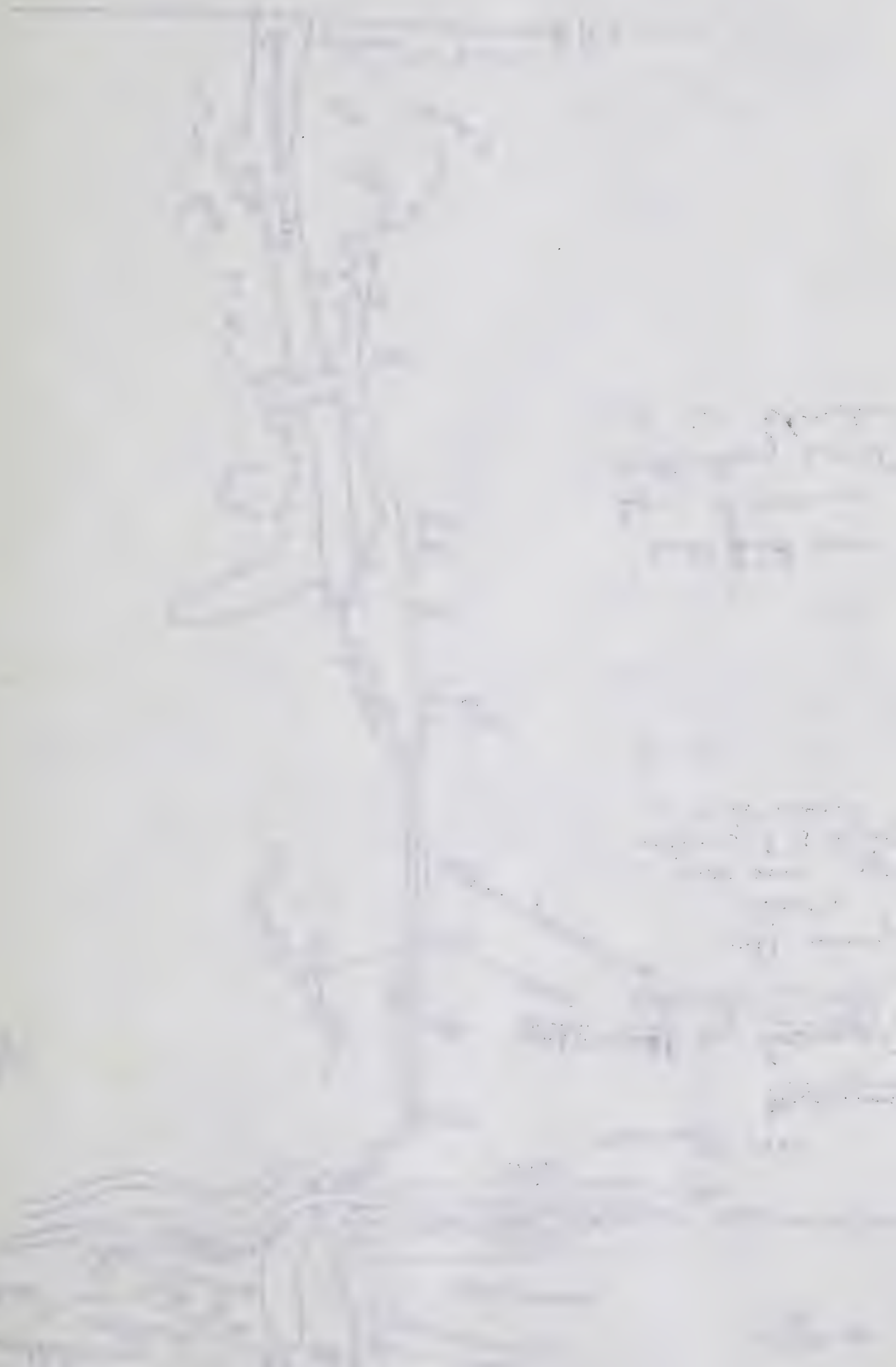
Melospiza

April 20 mouth San Lorenzo Creek Alameda Co., Calif.

cold windy cloudy.

Could scare up only about 3 birds in salt marsh.

Could find none in heavy Salicornia south along coast & in sloughs.

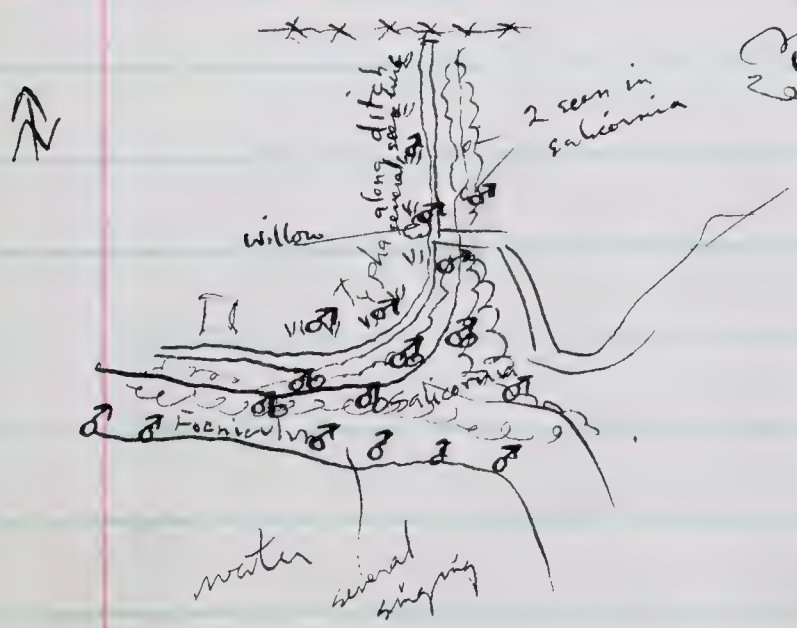


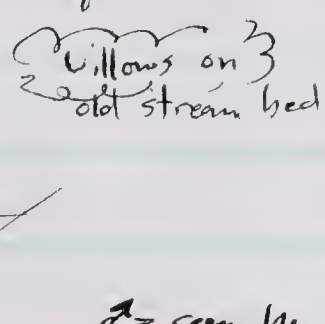
Melospiza

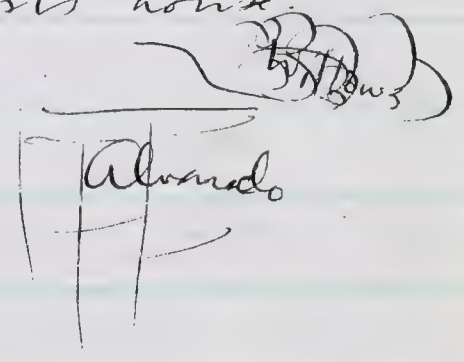
Apr 20 mouth ~~San Leandro~~ Alameda creek, Alameda Co., Calif.

3 PM windy, cold, cloudy. Very extensive tracts of willow, typha, etc on NE side Alvarado, but creek & growth do not get across highway to west except for one dried up tract of willows. Creek is drained elsewhere, apparently to N where a large shallow pool sighted with bare ground around it. Old bed of creek now a little salicornia slough. Across road from it is a ditch with Typha & brown song sparrows common.

At Mr. Best's house on N bank of Alameda slough 1 mi W Alvarado there are song sparrows in his garden. The slough is wide here & represents the original mouth of Alameda creek when the willows used to grow. The S. bank is now very high & supports solid stand of Conium Foeniculum & weeds with many song sparrows. Not seen in lush Salicornia itself. Steamboats used to come up as far as Best's house.







♂ = seen May 29

Coll 4 birds from 1 mi N Alvarado in willows, typha, weeds

Marshall, 1947

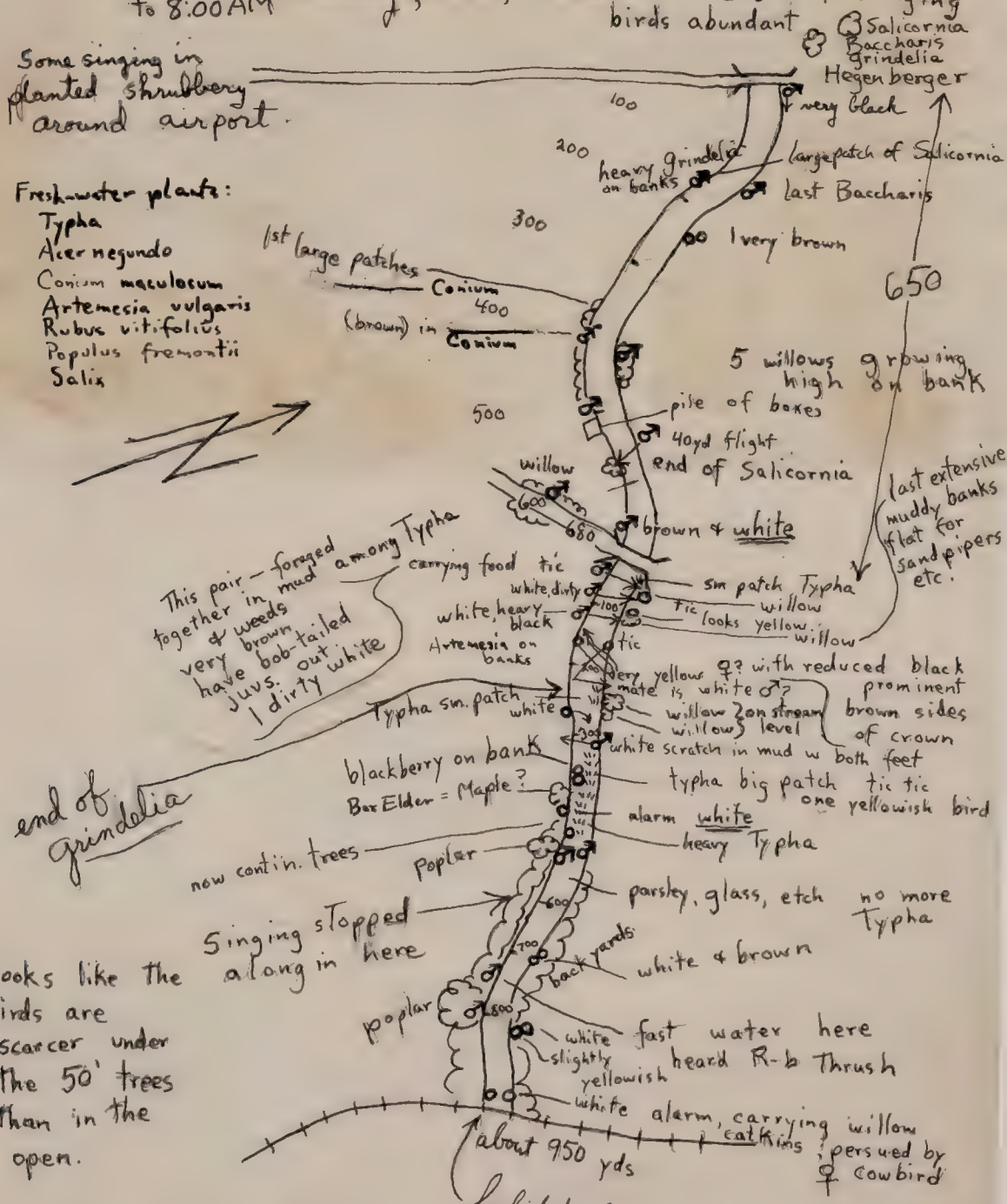
map & data made in field

Melospiza

April 26
6:30AM
to 8:00AM

mouth San Leandro Creek, Alameda Co. Calif.

cloudy, cold, calm. ♂'s all singing birds abundant



looks like the birds are scarcer under the 50' trees than in the open.

23± ♂'s in 1500 yards = 1 ♂ every 65 yards of creek

Marshall, 1947

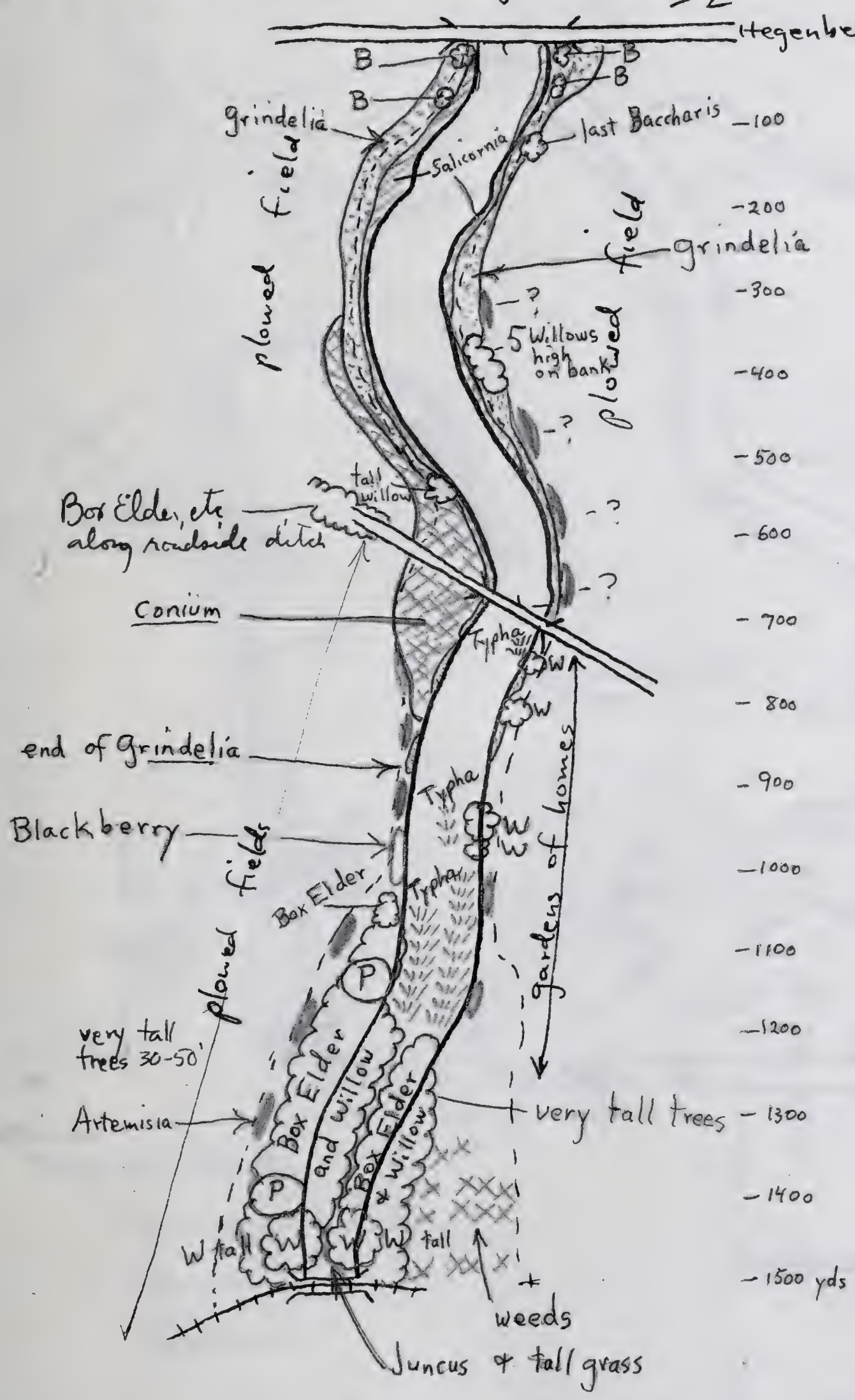
Melospiza

April 26

April 26, Mouth San Leandro Creek, Alameda Co., Calif - width

1 cm = 100 yds home map

width of creek & creek bank greatly exxagerated.

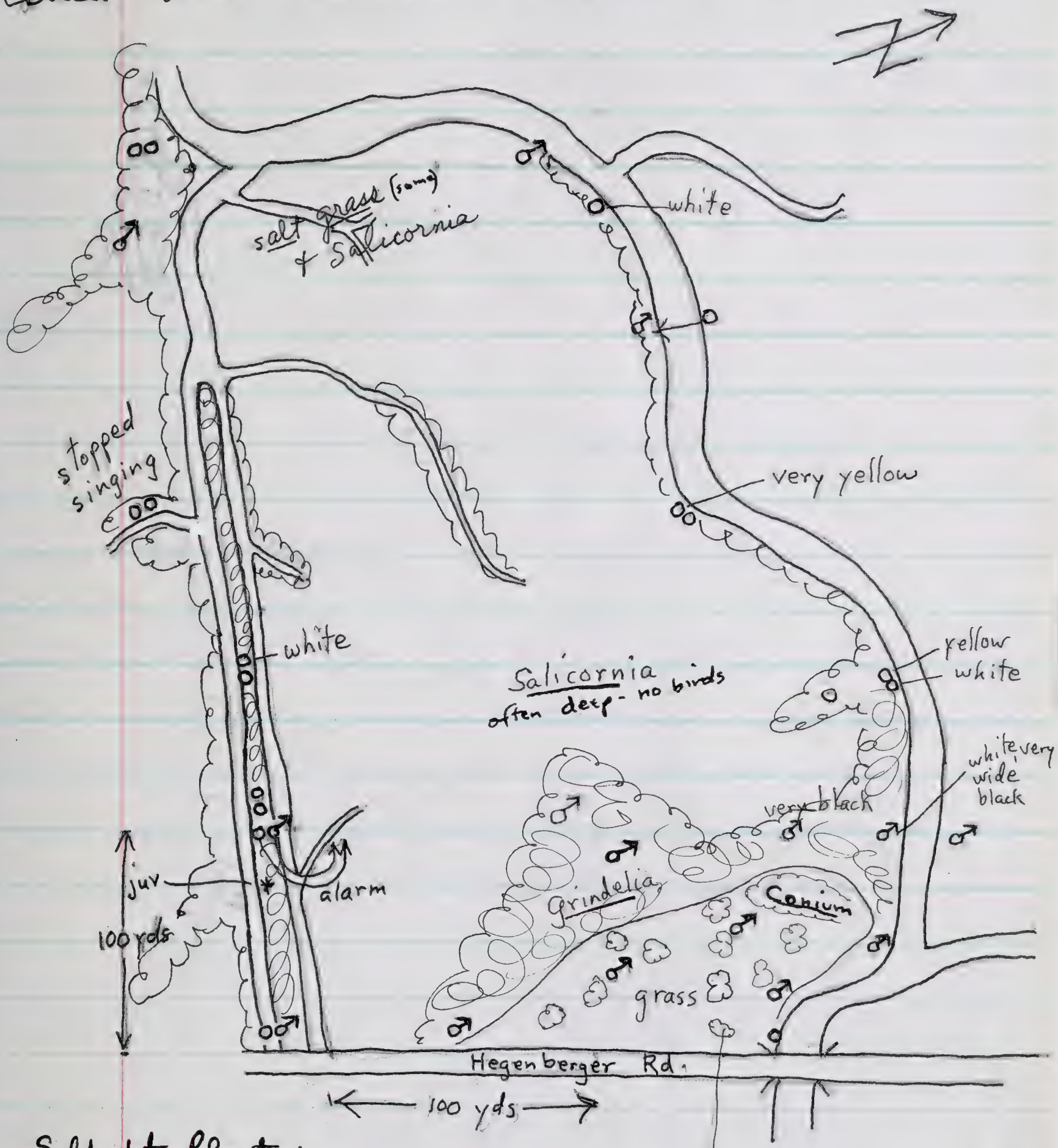


Marshall, 1947

& data
map 1 made in field

Melospiza

April 26 Mouth San Leandro Cr., Alameda Co., Calif.



Salt water Plants:

(Baccharis - high ground)

Grindelia

Salicornia

7 pairs in 400 yds

57 yds/pair

of slough on S. both sides

8 in 500 yds

62 yds/pair

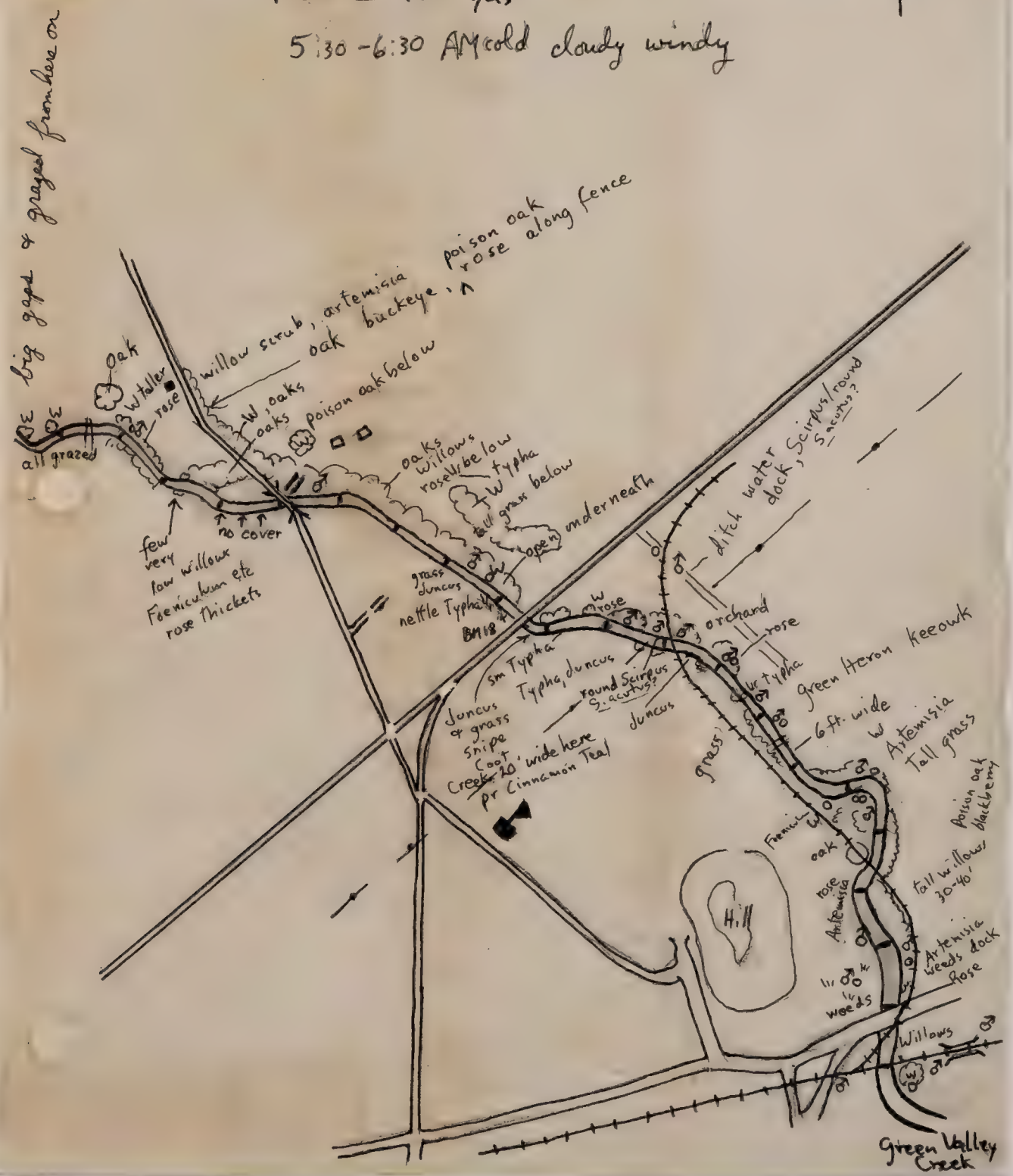
Melospiza

[27]

April 26 mouth Green Valley Creek, Solano Co, Calif.

1 cm = 100 yds

5:30 - 6:30 AM cold cloudy windy



Marshall, 1947 Melospiza

April 27, Cordelia, Solano Co., Calif. 7:45 – 8:45

very cold & windy

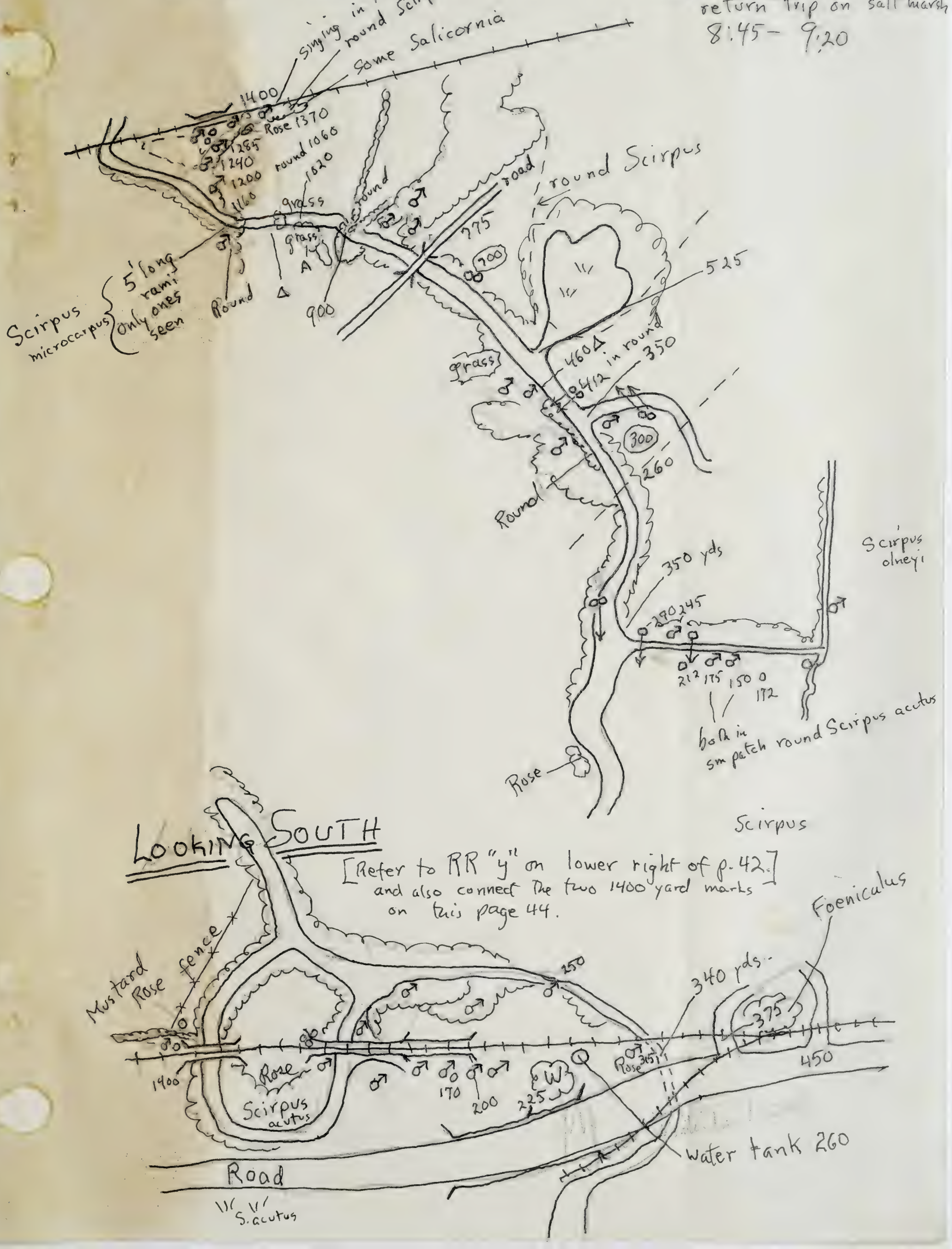
Salt marsh Habitats showing mouth of Green Valley Creek

1 cm = 100 yds

Marshall, 1947 — Melospiza

April 27 Cordelia Solano Co., Calif.

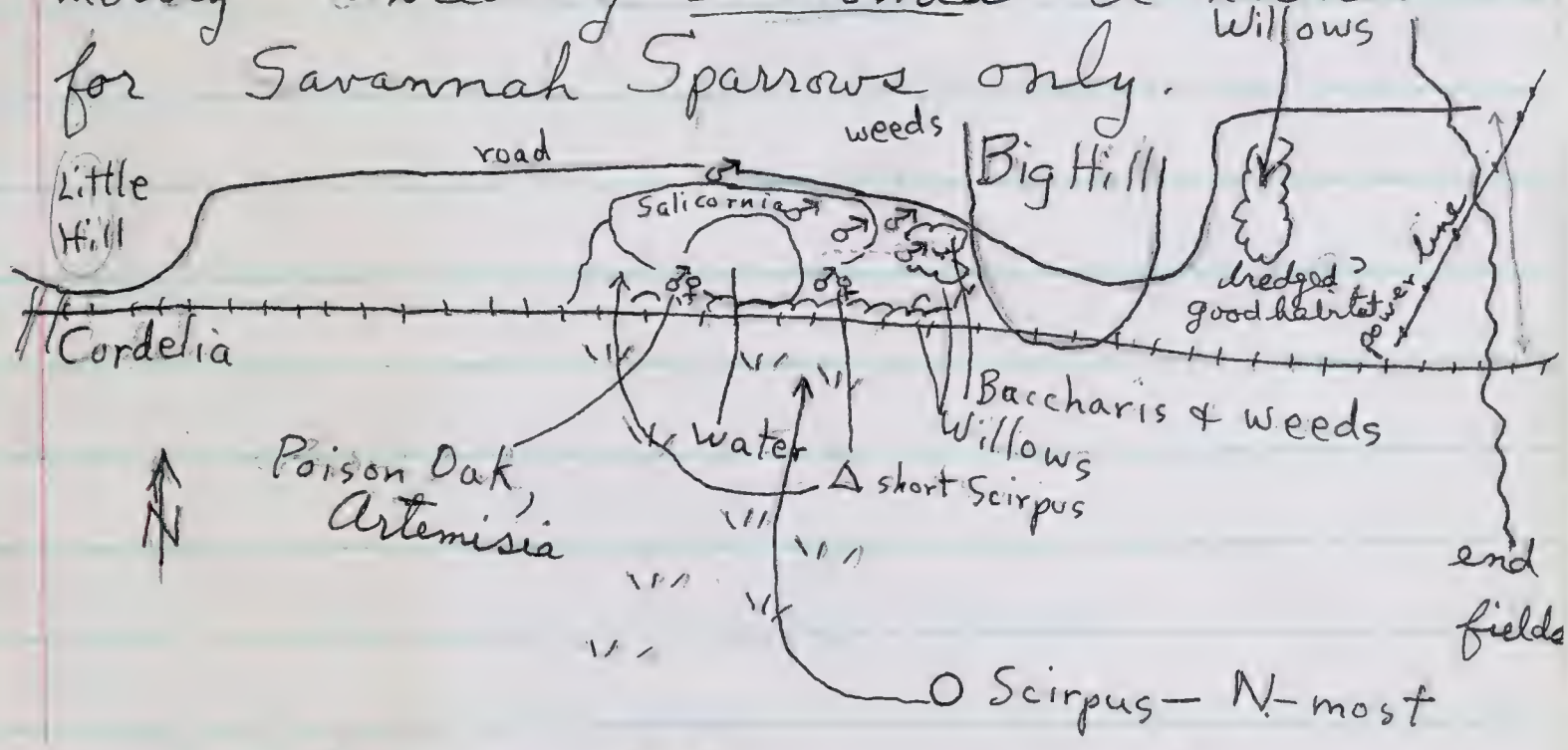
return trip on salt marsh
8:45 – 9:20



Melospiza

April 27 Cordelia, Suisun Creek, Solano Co., Calif.
Worked 5:30 – 11:30 AM Cold, Cloudy, windy
Many ss singing but possibly missed
some in Δ Scirpus marsh. 1st plotted ss
& veg on maps of mouth Cordelia Ck,
& Cordelia slough. Birds continuous along
stream & onto Scirpus marshes. An
interesting Salicornia area noted – individual
separated mounds of Salicornia 1' high
each tufted & suffused with grass (salt)
mostly concealing Salicornia. A habitat
for Savannah Sparrows only.

[= Scirpus robustus]



extension of Suisun marshes
Note at least 5 ♂'s were either singing
in or flew out of Salicornia to sing.
Not in rich tho dry growth weeds,
willows, Baccharis, etc. (fresh-water) – just
came to nearest willows to sing —
all based in pure salt marsh. Coll 4 ♂'s.
Coll 3 birds, 2 ♂'s 1 ♀ and heard
one more ♂ along Suisun C. shown on rt.
Creek dry – only 3 pairs in entire stretch of good willows.

Melospiza

April 27 Cordelia and mouth Suisun Creek, Solano Co., Calif.

Vegetation list:

Green Valley Creek (fresh H_2O)

Salix — round Scirpus
Juncus — Nettle
Poison Oak — Foeniculum
Rose — Artemisia vulgaris
Blackberry — Dock

Suisun Creek

Buckeye? — Foeniculum, Conium
Salix — Rose
Fraxinus oregonum — Artemisia vulgaris
Poison Oak — Rubus
Populus — Acer macrophyllum

Cordelia slough

Salicornia with Distichlis?
Rosa thickets on high banks
Triglochin maritima
Scirpus ○ acutus
" △ microcarpus
" ▲ olneyi

Melospiza

April 29 San Mateo Co. Calif.

Accompanied Wade 7ox along crest of hills of SF Penninsula. Series of ponds - typha, willow bordered. Summit supports tremendously dense populations - on very moiste gnd: cover is Juncus, Baccharis, Heracleum, multitude of other flowers & weeds. More ~~abu~~ dense & ter. more overlapping than San Pablo marsh. At SSF salt marsh saw 3 pairs pusillula along 350 yds of slough in very small ~~st~~ marsh relic - being now drained & filled. These birds noticeably small & yellow below, grey above. Not much singing, are in pure salicornia, but still only on edge sloughs when hop on mud of flat edge or banks. Flush from salicornia. Grindelia present but not a factor in SS distr. as is so higher than Salicornia & is uncommon & not conspicuous. As was found before at this marsh; SS in pure salicornia, forage under banks, silent largely, fly long distances (100 yds) along sloughs. One pair went into Baccharis briefly on roadside. Do not "squeek out"! Very elusive & mouselike; qt diff. all around from conspicuous, singing, fighting SS. of hills above. Grindelia is cuneifolia

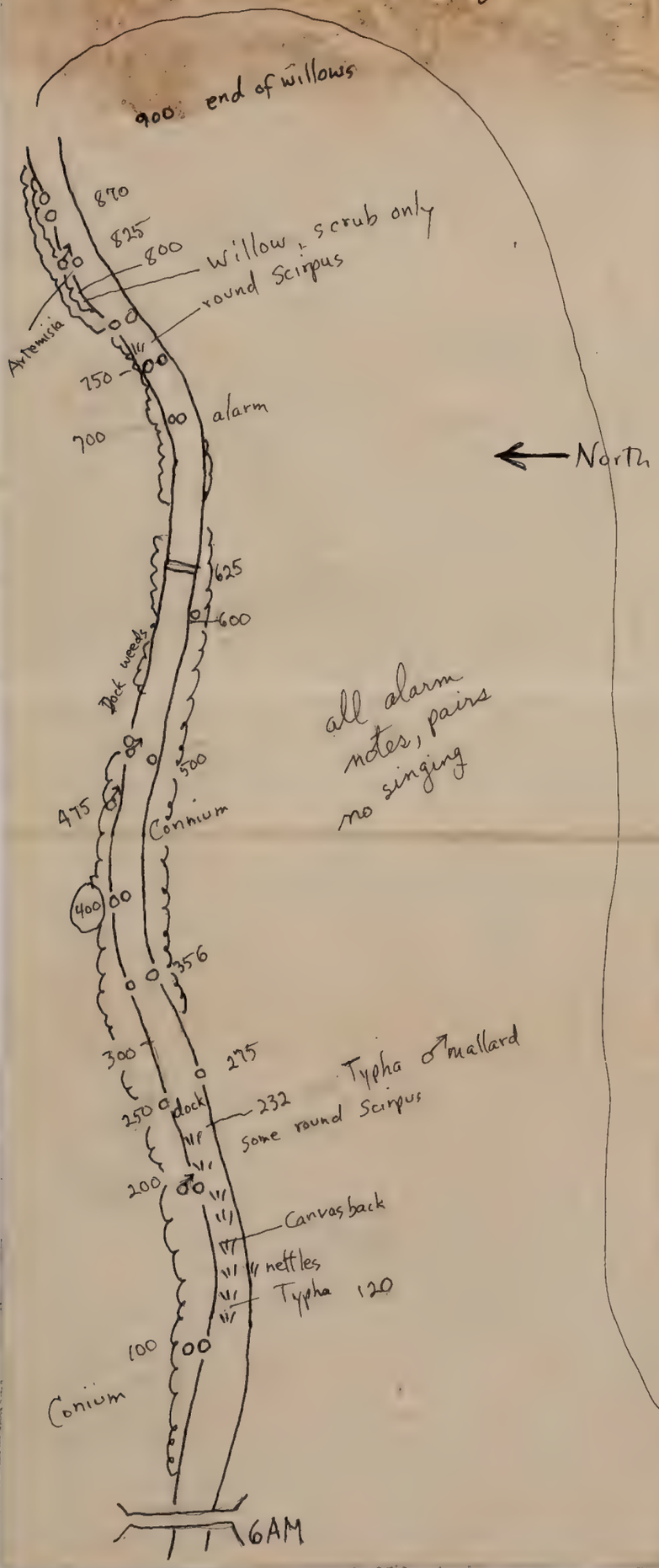
April 30, 1947
Mouth San Pablo Creek
Contra Costa Co., Calif

28 ♂'s heard from road on way back
7:10 - 7:30 AM
1 mile

Marshall, 1947

Melospiza

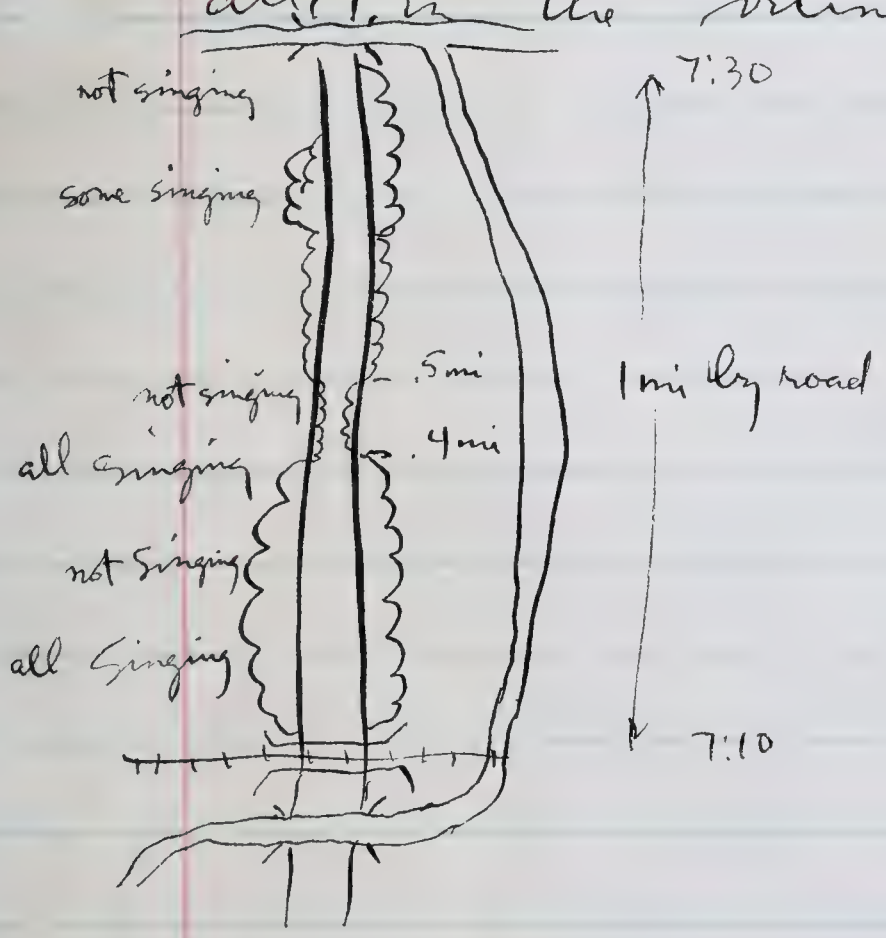
April 30 - mouth San Pablo Creek, Contra Costa Co., Calif.
6:00 - 7:10 AM
Walked from bridge at edge salt marsh eastward 2050 yds to railroad bridge. Spurts of singing as shown by symbols "♂" followed by pencil. A quiet by singers seen - alarm notes often heard. ∞ = pairs seen. Usually alarm notes or flushed. Some trees seen. clear, sunny, calm.



Melospiza

April 30 mouth San Pablo creek, Contra Costa Co., Calif.
See accompanying map for veg & ss.
Principal Veg:
Salix, Acer negundo, Buckeye, Typha, Conium,
(Some nettle, Rubus, Artemesia, only
one Heracleum seen, wild radish, 2 patches
round Scirpus, Dock common,).

7:10-7:30AM Hiked back along road N 11 creek
from RR to bridge at edge salt marsh
listening for singing ♂'s. Dist = 1 mi,
passed thru 3 cycles of alternate singing
& non-singing groups. At end — 1
or 2 birds — usually if any sing,
all(?) in the vicinity sing.



May 3 Mouth Patterson Creek, Alameda Co., Calif.
(See next page) In willows — saw Sparrows
feeding in foliage high in trees — getting
caterpillars apparently.

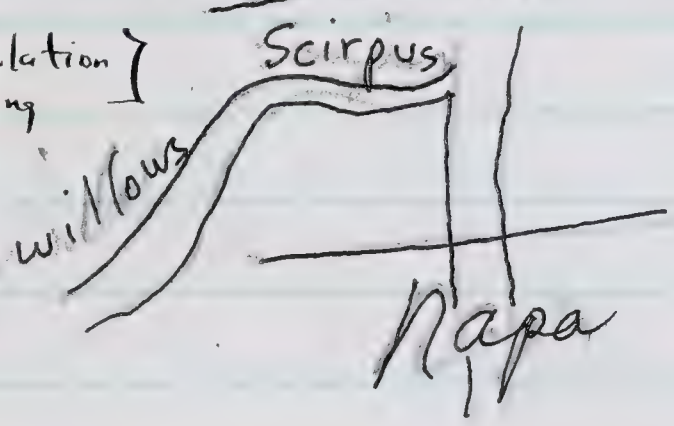
Melospiza

May 2 SF Bay airplane Trip

Napa R. 1 mi N – several mi S
very narrow habitat but OK
for single pairs, Scirpus
acutus up to Napa bridge, weeds
willows 1½ N of there

fresh water marsh

[continuous Population Intergrading]



Carneros Cr OK junction Willows
[No birds in "Willows" because of succession to oaks & Laurels] 300-400 yds.
Huichica Creek – gap 200-300yds
[Gap] [No birds along Creek until Longhorn's Ranch due to impermanence of H_2O & grazing

Sonoma Creek very narrow line
of Scirpus after last willow
[Continuous Population with Intergrading along gradually changing habitat] continuous Gt. expanses
salt marsh where crosses RR to
SE. Near mouth –
very wide salt marsh – Baccharis
only in lines along banks.

Conclusions: samuelis contin pop from Gallinas to Vallejo;
pusillula contin pop San Mateo to San Lorenzo, somewhat
interrupted by salt wks at Coyote Hills tho bds may extend
along dykes out in bay., San Leandro, Mulford Landing, "Emeryville",
Richardson, Corte Madera, SSF, Southampton,
Tormey, Pinole, Sobrante, San Pablo, Stege, "W Berkeley" all isolated.

Hayward –

Willows conn Salicornia

W end Hayward Airport

Mouth San Lorenzo Cr. Very narrow around Explosives wks.

[gap due to grazing] Salicornia marsh goes inland

gap until marsh at Mulford Landing

Then gap to S. arm of San Leandro marsh.

Looks like another Cr. to willows edge San Leandro Marsh.

Walnut Cr. all different

Willows almost to RR

Typha marsh opp. end willows

[Contin. habitat & intergrading in plant types gradually of long distance as at Napa & Sonoma & Novato Creeks] to W., Scirpus up slough to meet willows.

Benicia marsh isolated

Martinez marsh gap at bridge to E from Avon marsh.

Junction along W end Martinez marsh.

The isolated marshes (Benicia, Martinez, Avon) Cradled conn. with willows. Hanvener Pinoles & Sanuelis Lane

narrow connection at several places – Napa, Sonoma Cr.)

St Vincent, Belmont, San Francisquito, Alviso Coyote Hills.

Walnut Creek all changed from 1939. Willows now grown up & marsh contact with Salicornia. Thin Scirpus acutus.

May 2 SF Bay airplane Trip

Mouth Petaluma Cr. E RR bridge
1/2 sq. mi Pure Baccharis.

Petaluma Cr - side branch goes almost to Novato - carrying Salicornia — consid. gap 1 mi ±

all plants Petaluma marsh very extensive
looks like Baccharis, Scirpus Grindelia & Salicornia

Mouth San Antonio Cr. 3-4 mi S Petaluma
big bunch willows then gap
[gap] [due to grazing] of 400-500 yds.

Little Cr. SE Petaluma
[Examined in 39 or 40 no birds - too small] Good contact tho very narrow Scirpus Salicornia Stream very small.

100 yd. break at Black Point.

Mouth Novato Cr. broad between pure Salicornia, Scirpus [Spartina?] on bayedge.
Sm break by a stone dyke
NE Hamilton Field

Vallejo

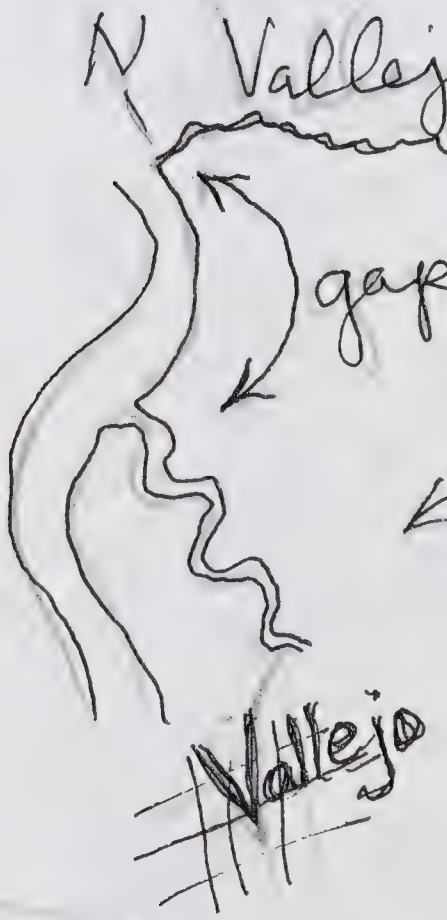
Big Typha marsh in Town

[No birds - Salicornia at other end [W]
due to Sewage?]

Broad belt Salicornia along
shore of Sears Pt. Rd.

[Birds Common - absolutely only species - 500-600 yd belt - Salicornia & Melospiza]

Big Gap on E bank Napa R



May 2 SF Bay Airplane Trip Willows
2 ponds - should look at
at my coll locality

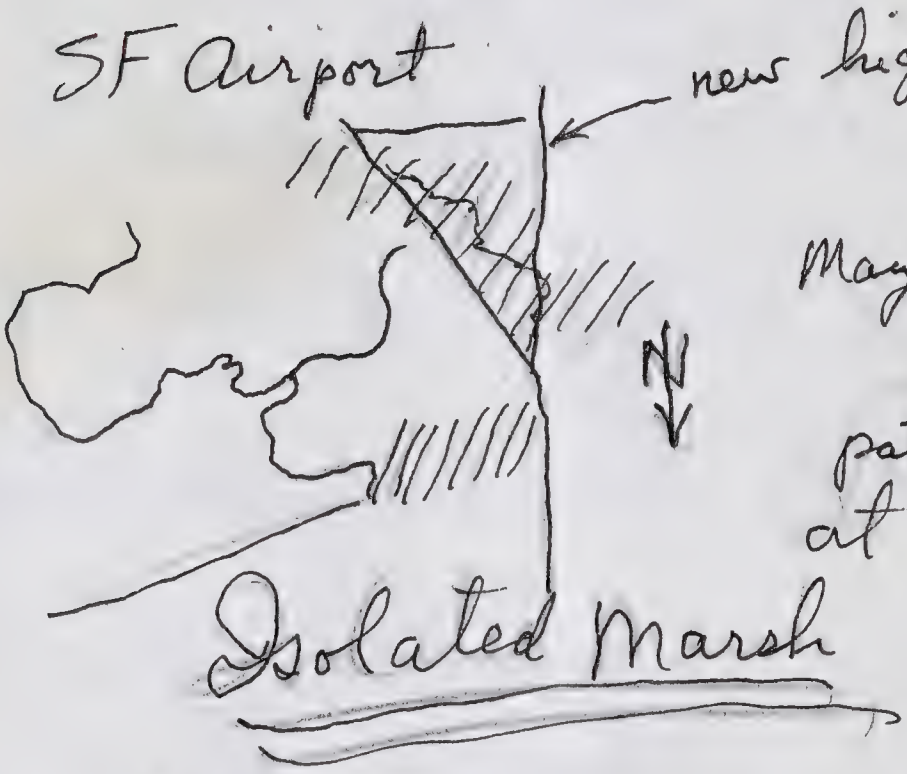
Gallinas Cr. Big bunch Willows
[sharp junction of 2 different habitats - birds in both] at St. Vincent School - 100 yds +
to Salicornia - grindelia com. by long slough to east Cr. has water.
[Willow-Type → Salicornia Grindelia in space of 100 yds] Big Gap at Highway - Gallinas Creek.
Pond with willows at dump on S face sm. hill.
[has a ♂] Big Gap at Cr. N end Hamilton Field

[birds present all the grazed - gradual change of habitat - narrow population] Novato Creek - Many willows at highway - Salicornia 3/5 mi down. Grazed between - might be OK.

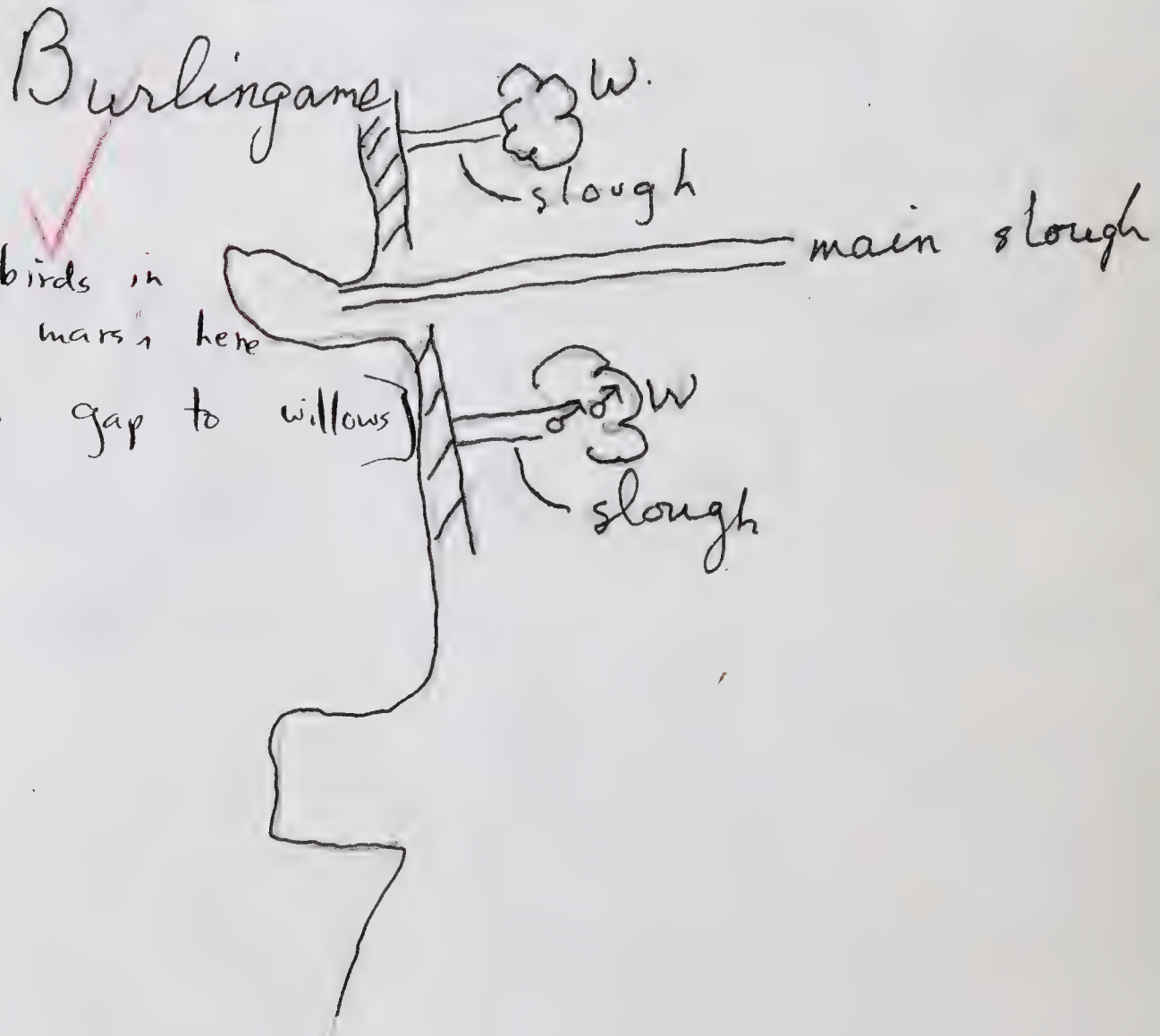
Big patch Salicornia on N bank
mouth San Rafael Creek
[broad integrading & large pop. in both fresh & salt marsh, all crowned head of marsh] Corte Madera - head Super Super
[= good connection willows to Salt Marsh.]
Mill Valley Cr. Willows cut down - now a 200-300 yd. gap.
[Used to be broad conn. N Corte Madera in 939-40] Coyote Creek Spotty Willows
[This is Coyote Creek, Marin Co., not Santa Clara Co.]

[1939 only a few birds along bay side of creek - many on sea coast
∴ willow birds at & near Richardson's Bay are closer to salt marsh birds than to sea-coast birds)

fr. H_2O marsh SE corner SF then minute salt marsh conn. with narrow line willows the SSF ridge



May be a few birds on 2 patches Salicornia at S end airport.



[No birds in salt marsh here
– also gap to willows

May 2 SF Bay airplane trip Melospiza

From San Mateo Point S. big sloughs.

Vic. Race track beatiful areas of pure Salicornia dark green.

Between Belmont & San Carlos.
N & S side quarry hill willows joined to Salicornia

[big gap actually too narrow habitat for birds along the man-made ditches]

Redwood City same deal between the 2 highways; also by Gas Tank

[Big Gap]

[No birds due to Sewage] ← gap by highway.

Contin salt marsh from San Mateo Pt to Dumbarton.

[The "salt marsh" is actually fresh Typha & big gap to bay Salicornia marsh due to drainage] San Francisquito to big salt marsh Great willows Scirpus

2 Mi NW Alviso A Typha marsh several acres - joins Salicornia.

[No birds in either due to artificial dykes & sewage]

[Gradual change from Alviso (Guadalupe River) narrow salt to fresh habitat with interdigitation of habitats - still in fairly natural condition - intergrading involving broad belt of song sparrow pairs.]

[Gap on little creek west of Guadalupe River - due to dykes & grazing]

Coyote Creek pretty bare-
[Too narrow for Some Scirpus worth a toy birds - gap of several 100 yds] Should coll. again on willows to see if pop stabilized to Sutterencis - should not get yellow birds there]
Also Gr. W Coyote Creek
flows into Typha marsh.
[Typha marsh man-made - all butchered up, but birds there & also in adjacent Salicornia] mostly Comm.
Ponds isolated S of Power
plants SE of Coyote Hills
Another NW Power wks.

Dumbarton Road - end Salt marsh
going N - but carry along
on dykes.

best Coyote Hills Crk. Great
[broad pop. intergrading] another just North Patterson Cr.

Alvarado - Should work
ditches along RR.
[should examine - fresh water birds abundant along there ditch
Comm, Typha
A reservoir with Typha & Willows
at Mt Eden near edge bay.
[should examine]

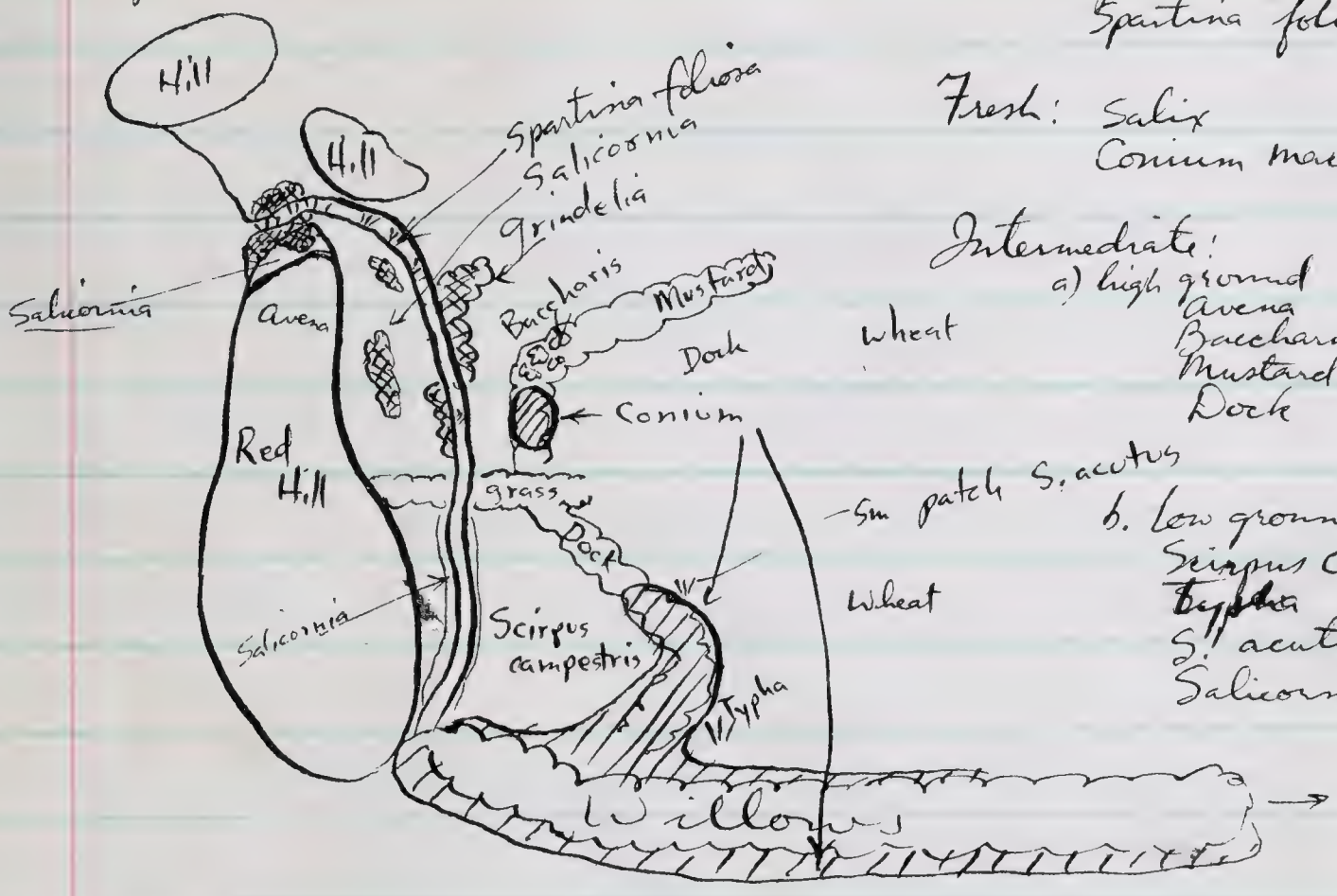
Melospiza

May 3 mouth Patterson Creek (N & NE sides of Red Hill, Coyote Hills) Alameda Co. Calif.

See accompanying maps →

Other Sp seen: Mallard, Savannah Sparrow, Clapper Rail, limit, Tule Wren, Redwing, Yellowthroat, White-Tailed Kite (1), ♂ Marsh Hawk (alarm), Red-Tail 1, Sparrow Hawk 1, Vultures

Vegetation:



Salt: Salicornia
Grindelia cuneifolia
Spartina foliosa

Fresh: Salix
Conium maculosum

Intermediate:
a) high ground
Avena
Baccharis
Mustard
Dock

Wheat

-Sm patch S. acutus

b. low ground
Scirpus campestris
~~Typha~~
S. acutus
Salicornia

Wheat

Typha
grew S. campestris
some S. acutus

It looks as though last year, tide was not shut off at the locks, and the present Salicornia & dead S. campestris would have had more birds - still would be an intermediate habitat, however. Of interest is distr. of Savanna Sparrow - inseparable from SS in salt marsh - in intermediate area was in grass, not tall Conium etc. More than SS in Salicornia, less in Grindelia.

Marshall, 1947

Melospiza

mouth Patterson Creek

Alameda Co, Calif

May 3

6:45

slough

weedy bank

dry wash

willows of 2nd creek

Salicornia wet tidal

525

Spartina here in wet sloughs

grass on top of bank, Then dock, Conium

Scirpus here in dry sloughs

real yellow dock & Conium

dry gulley

fields

Savannah Sparrows throughout

Also covered ditches along RR Track between Alvarado & mt Eden far from willows but SS very abundant thruout in Conium, Typha, mustard Dock etc along ditches A very big population

docks

190

510 bank bank

hill

grasses Salicornia

Salicornia wet tidal some Scirpus some weeds

white 65

dock weeds

55 water row

Salicornia sparse

340

15

white

450

155

fight

white

200 start Scirpus in gully

Conium on bank

360

250

both yellow narrow many black streaks

250 white

in Scirpus

324

white 300

juves

yellow 325

juves wheat

S. acutus 390

350

Sal. dry wash

190 Scirpus dry

25

275

40 yds

very yellow 75 Dock Dry Scirpus

425

450

Sc. acutus

Solid dry Scirpus Δ- leaned

kite

tall Conium 506

S Δ

hill grass

dry ww

white

white

Scirpus dry

Typha

Scirpus Typha

dry slough

Dock

Scirpus

Scirpus dry

Scirpus & Dock dry bank Conium

Typha

end of wheat field

600

500

412

370

Conium

Typha etc

300

white

250 juvs

white

225

Conium

195

(leved) dock

Scirpus

Conium 150

Conium 230 yds

zero

W

Willows

Conium mustard

dry

road

yellow

call 2 a pair here

265

wheat

Marshall, 1947

Melospiza

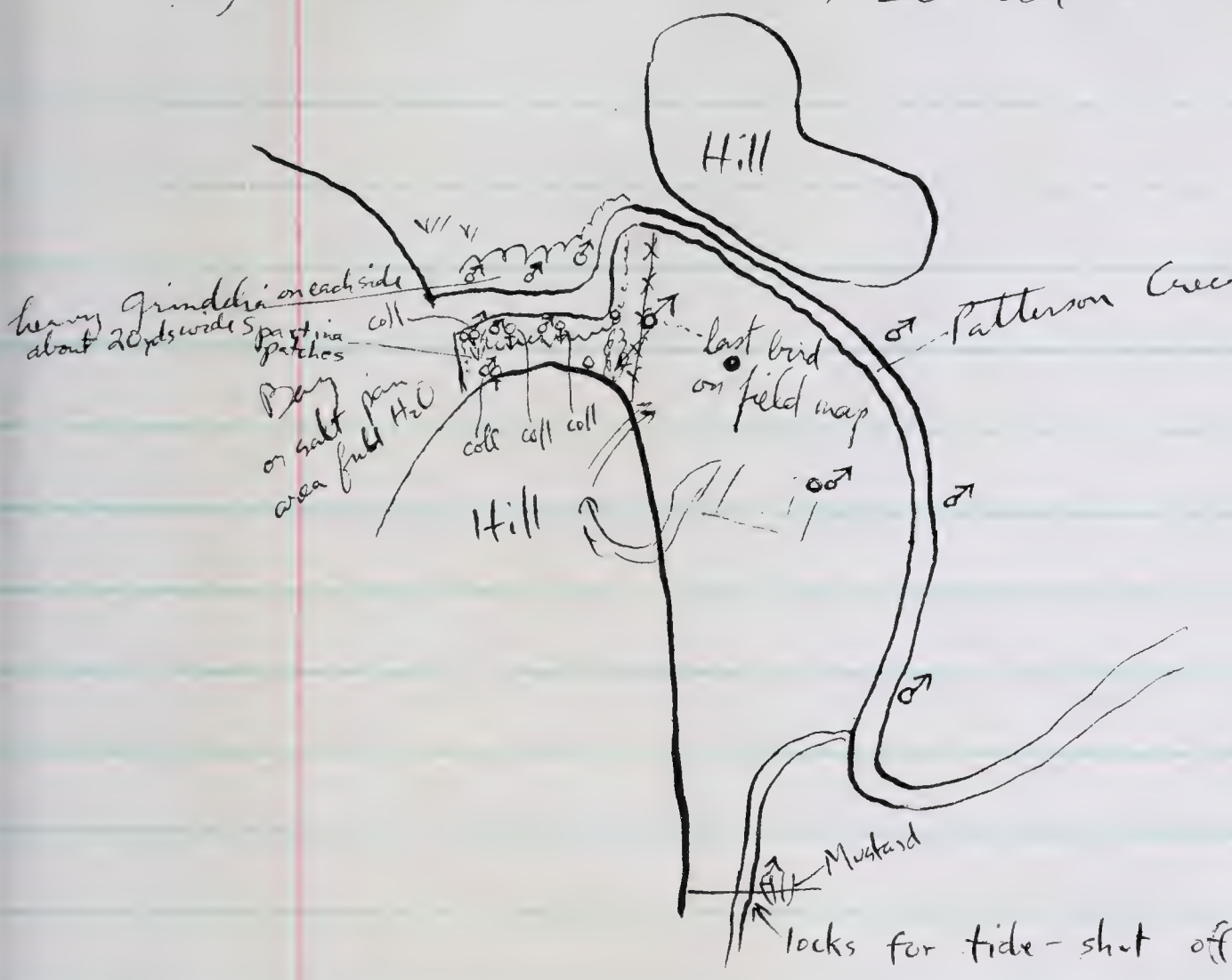
May 3, mouth Patterson Creek Alameda Co. Calif.

Much commoner at mouth of Patterson slough where extensive grindelia. Coll 4.

Marshall, 1947

Melospiza

May 3 Mouth Patterson Creek, Alameda Co., Calif.



The fence shown is end of area 2 censused in field. I then coll 4 in Grindelia at mouth & noted so many birds there that I now add this as a memory or guess work supplement to show how much more abundant the birds are in the extensive Grindelia at mouth compared to their paucity along 600 yds of slough with Salicornia & very little Grindelia covered on field census.

At the lock - a ♂ SS & ♂ Savannah Sparrow perched for 15-20 min in same bush preening - after bathing. Both had identical alarm note of "tsip"; neither paid any attention to the other. There were about 10 Savannas in the Salicornia surveyed in place where only 4 SS. counting many in grass along cliff. Less in Grindelia.

Marshall

Wagon Road

San Mateo Co. Calif.

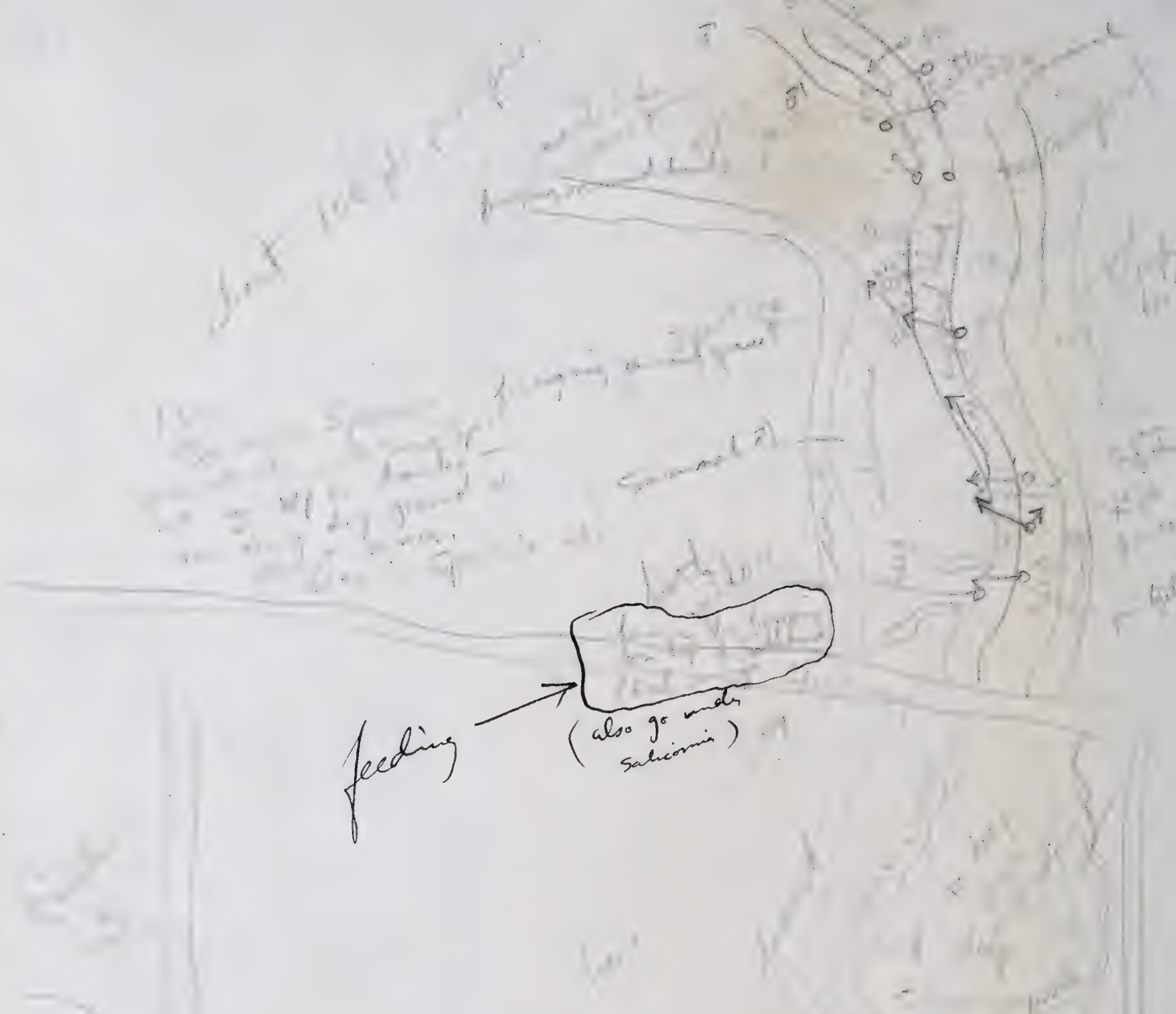
calm cloudy.

big slough

"Pebble Plant" or legume?

1 or 2 land in ...
1000 yards from Bay

(willow Buckeye)


feeding
(also go under
salicornia)

Marshall 1947

Notes p 1/3

May 7 Redwood City & Vicinity Co.

big slough with mud banks & grassy grindelia & Salicornia grey right out middle of town, passing fair bank for killdeer, no birds. Can land anywhere near Portland but can't get directly from grindelia across street. In middle of town Lt Illum. Would be best on shallow contours for long [illegible] of Redwood Creek & Redwood City. Can land [illegible] Heard birds in Redwood City grindelia

Redwood City — No ground in Willows. Can 500 or more yds to [illegible] — conduct find birds on inside [illegible] — good small marsh on bay side in 350 yds — rich grindelia, Salicornia & [illegible] Spartina along banks [illegible] Land.

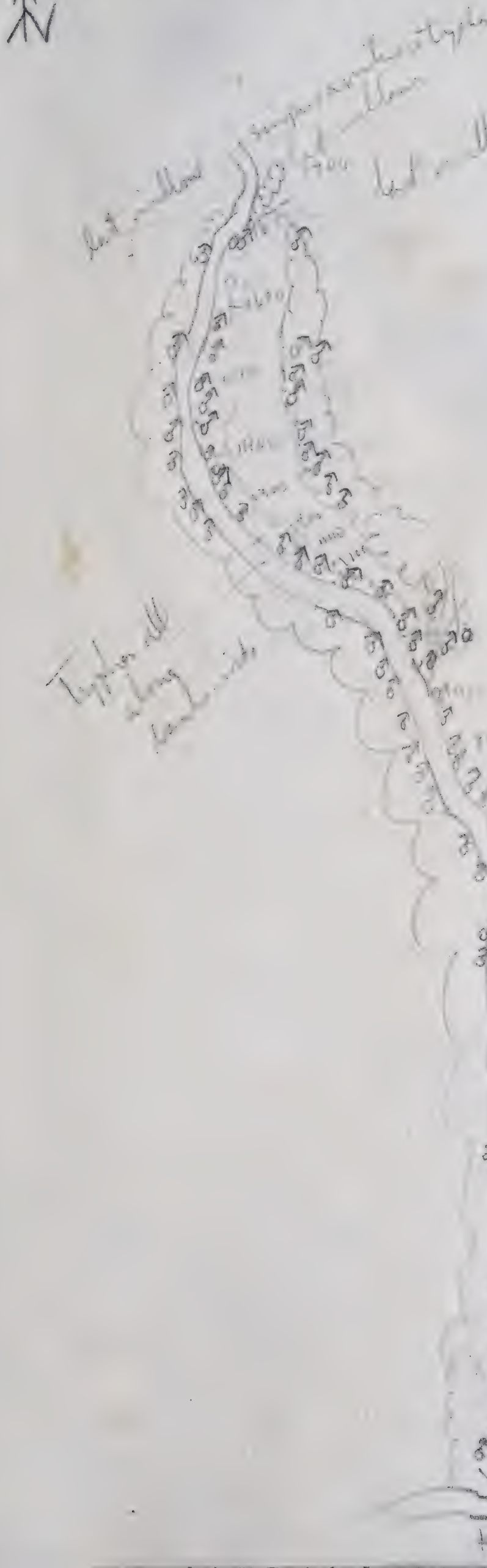
Melospiza

May 9 Peninsula trip with Fox.
Drove along Coast Highway to Halfmoon Bay then over to Palo Alto. Hills fronting (immediately) the ocean seem to be drier here than Marin Co., get Artemesia californica & little Heracleum & few song Sparrows in such a place as Hills IV Montara. But on the crest, where fog is caught, gigantic chaparral-willows tall (20') Ceonothus, etc ferns — must have contin. ss population. Then (going inland) apparently contin. ss in moist undergrowth of Redwood, then oak-madrone down bay slope, then finally rests to willows along streams by time reach flat oak-grassland. This is all conjectural [Right] Heard Hermit Thrushes & Purple Martins in Redwoods of Summit Skyline Blvd.

[No. 17]

May 11 mouth Walnut Creek, Contra Costa Co. Calif.
sunny clear calm, 5:30–7:30 AM. Got as far as 1700000 mark on Pacheco Creek, Cargninez ☐
This survey of particular interest because stream was denuded of veg. in 1939 which made gap all the way between Highway 4 & the RR. Now a contin pop. but very skimpy at RR vicinity The rest of Pacheco to bay must be about same as what I covered — all unnatural with banks, etc.

May 11
11:30 AM – North Walnut Creek, Contra Costa Co., Calif.



Marshall, 1947

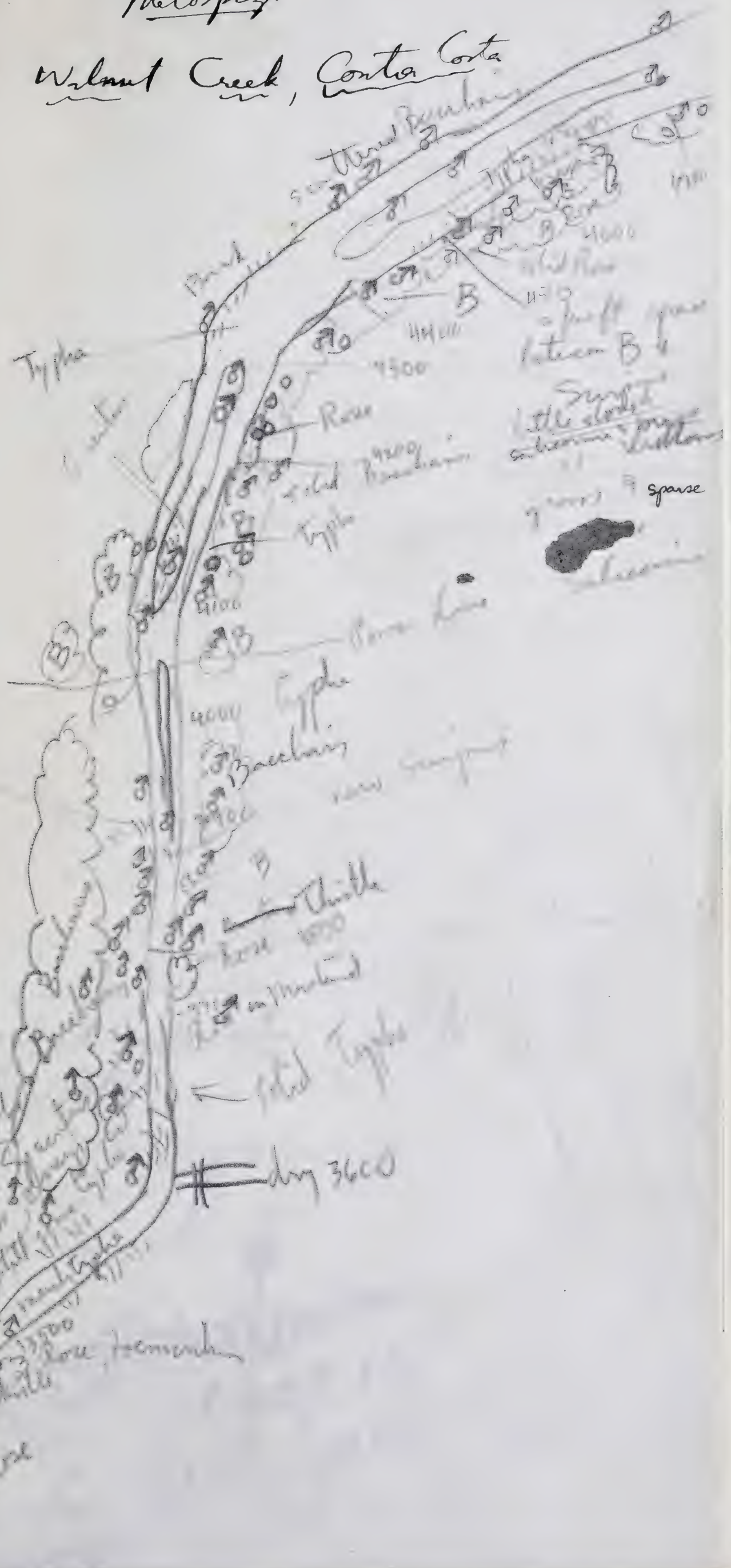
Melospiza

May 11 mouth Walnut Creek Contra Costa Co. Calif.

Marshall, 1947

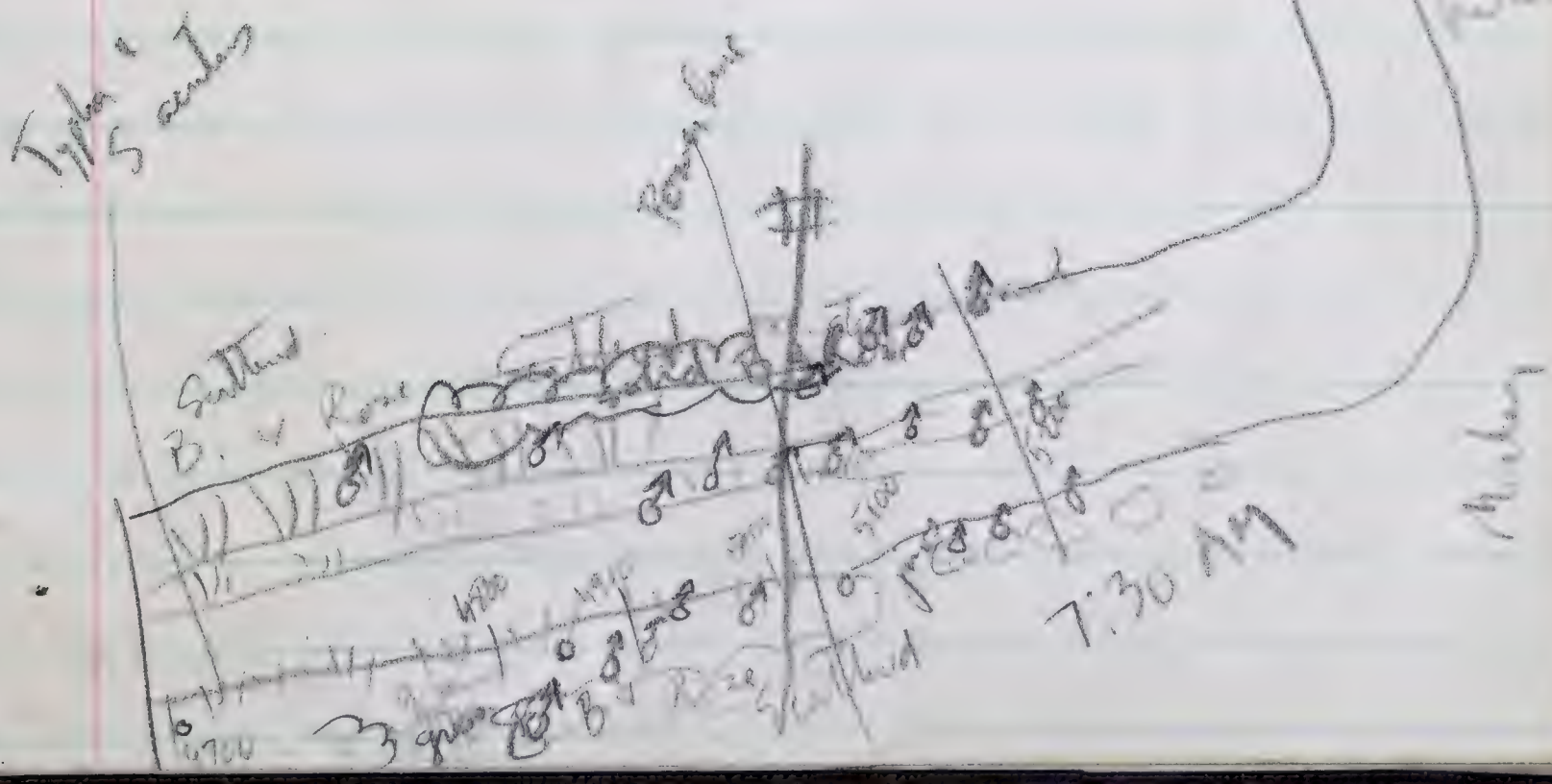
Melospiza

May 11 Mouth Walnut Creek, Contra Costa Co., Calif.



Toward Avon

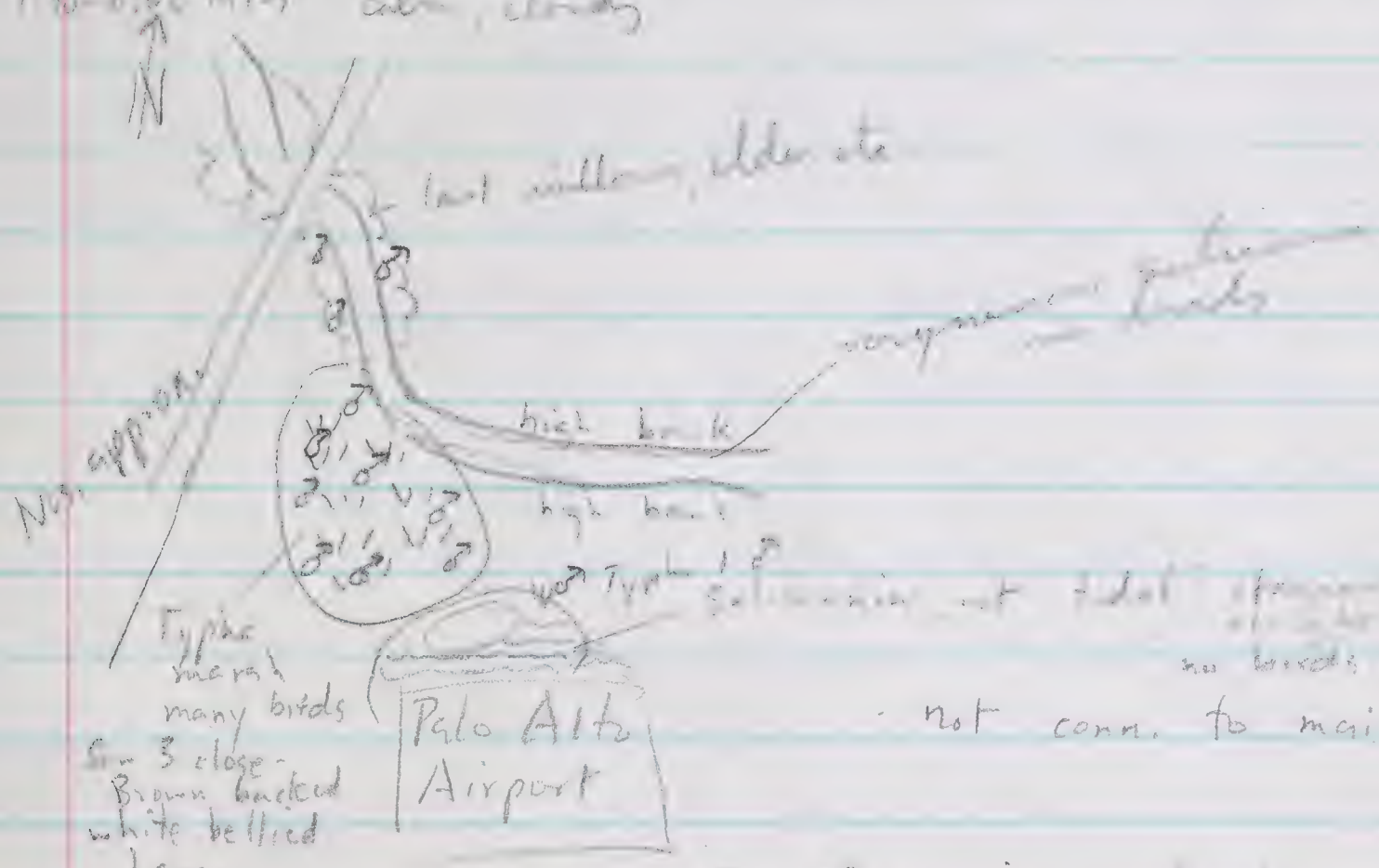
Continued
May 11 north Walnut Creek, Contra
Costa Co., Calif.



Marshall, 1947

Redwood City

May 12 | mouth San Francisquito Creek, Santa Clara Co., Calif
7:40-8:20 AM calm, cloudy



Typha marsh many birds
Sm 3 clapper
Brown backed white bellied
large.

not conn. to main bay

Mouth of This is natural

Typha marsh has tiny cut extension around it — all in a dirt dumping place

2 mi W Alviso, Santa Clara Co Calif

A typha marsh [illegible] in flooding fresh water to west of garbage dump. Here very grasses only about 1 acre of Typha at most. The bay shore here has 2 great banks with [illegible] segment dumps between - the area for mile [illegible] (N) a marginal salt marsh [illegible] on the edge of bay here is an [illegible] (whose water is [illegible] with [illegible] tidal flow) [illegible] marsh off shore in the salt [illegible]

Alviso, Santa Clara Co Calif [illegible] surrounded by salt ponds in Salt marsh. Probably a small area [illegible]

Marshall, 1917

Melange

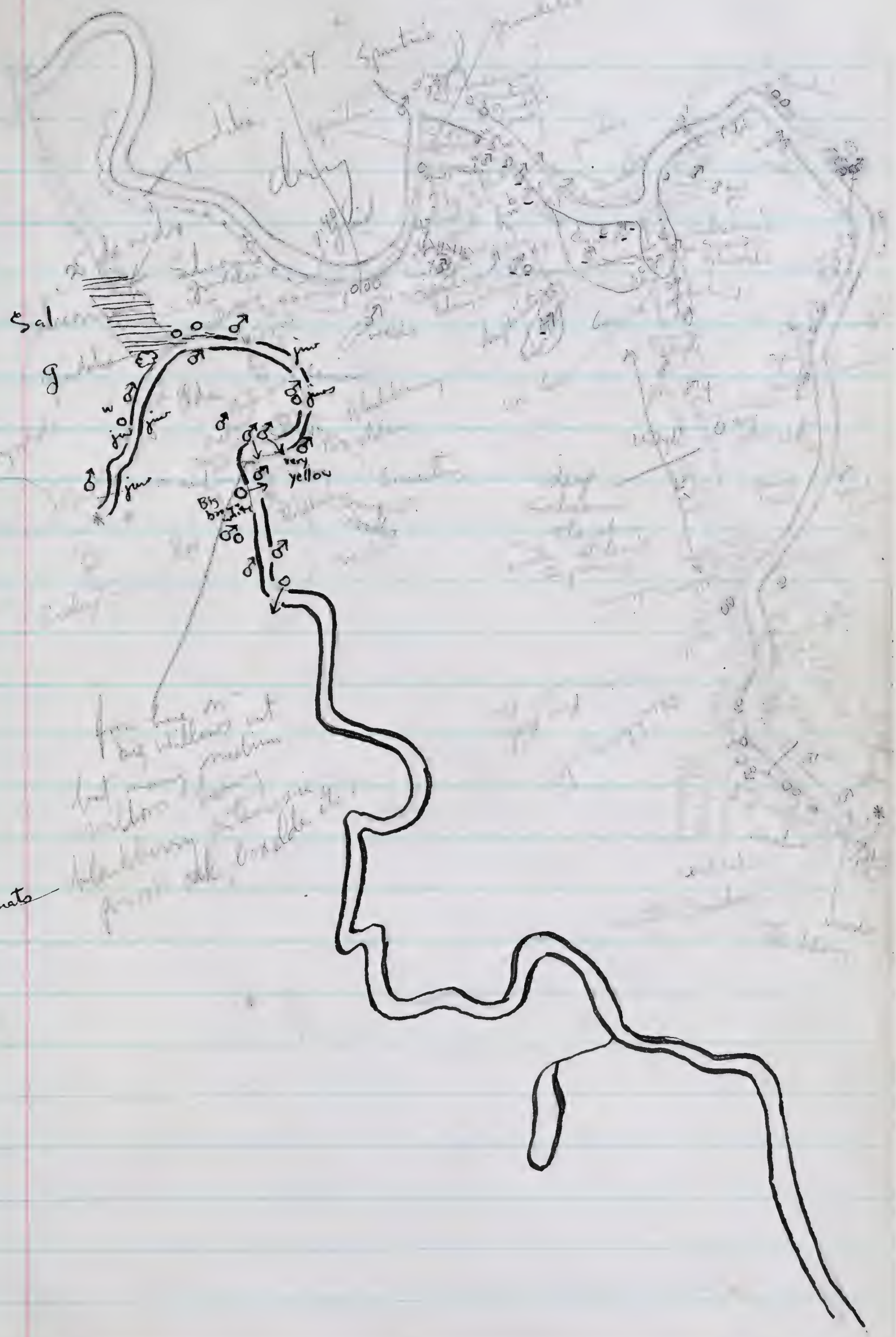
May 12 Above Santa Clara Co. Calif.
Elev. [illegible] (to mill for corn) one gal
of 1100 yds when dry yes thoroughly
and has only 3-8 pt. sediment in
overlying water — a total loss
Lick gasoline. See geology for upstream
1 lb at 700 yds S. Rec. Thirsty 950,
In South side body one living 9 —
since Separate with at first 1 or 2
Restrictions of willows from here 5 quarters
Sec. and detached pyr-botrus.
Guadalupe River — for city use, temp.
fine exception clay at — Calcium
Carbonate, — Willows and Sycamore
Cottonwood, — Willows and Sycamore
Above → Coyote Creek See geology. Rec. on
in the type most of in use [illegible]
many dead timber for flat rock (1 lb)
Bell 2 pints of salmon of my 25
the mill by very small detached pyr-botrus
Pit detached very far from Coyote and
however.

Marshall 1947

May 14 Coleroc, Santa Clara Co., Calif. Map #1

6:00 - 7:40 AM

Guadalupe River



Marshall, 1947

Melospiza

May 14 Avon, Santa Clara Co., Calif.

(1 juv yellow) (2 juv white) Grindelia
3 ♀ Grindelia
4 ♂ weeds
5 ♂ y Grindelia
6 ♀ y "
7 ♀ ≠ small Salicornia
8 ♂ Spartina
9 ♀ "
10 ♂ "
11 ♀ Grindelia
12 ♀ "
13 ♀ w "
14 ♂ w Salicornia
15 ♂ w "
16 ♀ } 17 ♂ } big brown white } all together on bank – Salicornia
18 ♂ }
19 ♂ Willow
20 ♀ } 21 ♂ } pair + several juv Conium
22 ♀ yellow } 23 ♂ } Conium
24 ♂ } 25 ♂ } threat - close in orchard tree
26 ♂ } 27 ♂ yellow } Salicornia
28 ♀ Salicornia
29 ♂ " + Grindelia
30 ♂ brush pile
31 ♀ y? Salicornia
(32 juv) "
33 ♀ } 34 ♀ } pair in Baccharis
35 ♂ wb } 36 ♂ y } "fighting" weeds
37 ♀ } 38 ♂ } pair Baccharis → Willow ~~scrub~~
39 ♀
40 ♀ wb } pair alarm + 4 juvs Willow
41 ♂ bw willow + juv
42 ♂ Conium in yard
43 ♂ + juv } Salicornia
44 ♂ }
45 ♀ very yellow }
46 ♂ Willow
47 ♂ Salicornia - Grindelia
48 ♀ } 49 ♀ } pair + juv

This is a copy of The field map, made to correct error in topographic map.

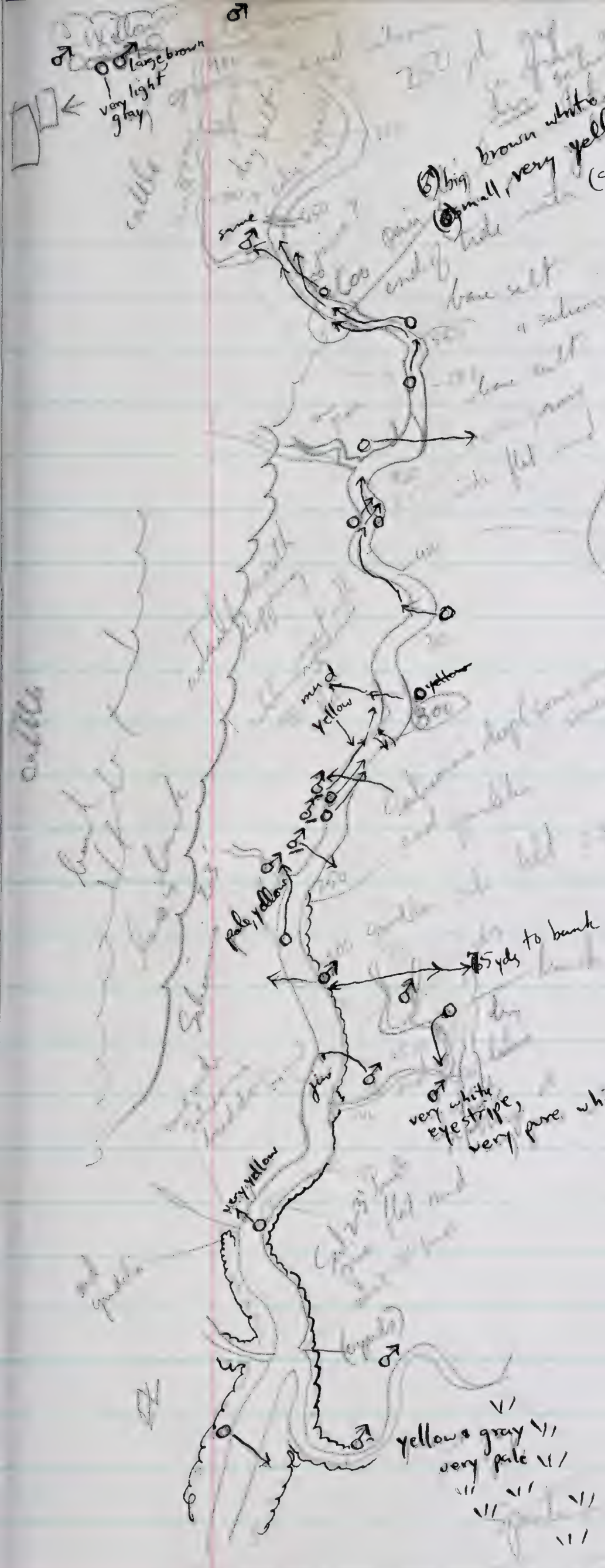
50 ♂ } 51 ♂ } 52 ♂ } weeds on top of bank
53 ♂ Willow
54 ♀ Vines on Privy
55 ♂ Conium
56 ♀ } 57 ♀ } pair + juvs Conium
58 ♀ } 59 ♂ } Conium, Blackberry, Willow Cuttings
yellow, grey

Marshall, 1947

Melospiza

May 14 Aviso, Santa Clara Co. Calif.

Map #2


♂ ♂ ♂ large brown very light gray
(1) big brown white, white superciliary
(2) small, very yellow
(shut off by a bank)
same
♂
♂
♂
300 yds
♂
♂
♂

Marshall, 1947

May 12 & 14

Sept 16 & 21

Melospiza

Alviso, Santa Clara Co. Calif

Circles indicate areas of collections:

All within 10 yds of actual sloughs.

A 3679-3690 med. tide

B 3625-3634 very high tide. Bds. partial to Grindelia, Savannah Sparrows also

all except 3639 are within 5 yds of the rivers edge

C 3615-3624 med. tide

D 3635-3642, 3691-3692 tidal water here.

E 3693-3702 no running water, just conn. pools high, artificial bank of R. stagnant water. High trees but very open growth. Ssp. thick - more so than at D saw Chestnut-backed Chickadees & Golden-cr. Kinglets

Savannah Sparrows in flocks, perching on wires & on R/C file!

At no place were birds more numerous than in May, except for 1 loose flock of 8 or so bds. in brush piles at B, some taking long flights.

gap where S. campestris & Salicornia only 4-6 ft wide.

Mustard

S campestris

Typha

Cattle

150 yds from this bend is 1st bird

Conium

4 males 2 females here

Typha

weeds

No Creek here now

Box Elder

250 yd gap

willow Box Elder

Conium

Willows Tall

Willows

pair both big & very rich reddish browns

Willows

Willows

Box Elders

Pure salicornia for 3 900 yd survey

400 yds in 18" board

only one seen in Spartina slough

too low

Artificial fresh water pools

Dock

Salicornia

Cattle

Bare some salicornia Typha

Typha

Willow

5 ♂'s along track in 525 yds May #2

yellow-grey bird - only walk

A

Spartina all matted flat

Spartina 2-3' matted Salicornia & by salt grass

Spartina and Salicornia

gap of 270 yds along stinking sewer slough

big brown

Typha & S. lacustris

gigantic Conium

Scirpus microcarpus wood etc around houses

Salicornia 3-8' wide

Burrowing Owl

Citellus

Bare

Willow

Rose

Spartina

B

C

willows cut

3 or willows Artemesia Conium Blackberry etc

Surveyed to here May 14 Map #1

D

Scirpus lacustris

Artemesia

Conium

Bare

Willows

Big Willows

Conium

H_2O

Dry

Willows

E

Melospiza

May 16 Vallejo & Napa, Solano & Napa Cos, Calif.

Stopped at big marsh in middle Vallejo - about 2 mi long, Typha at SE end, Salicornia at NW end. No Song Sparrows found at all. Plenty redwings, coots, ducks.

Alt pure Salicornia on shore s side Sears Point Road at turn where 11 shore: Hiked 500 yds along man-made small ditch to shore. About 9 or 10 birds along & in the ditch. Came back to road 11 ditch about 100 yards W of it - 8 birds representing 5 or 6 pairs in pure heavy Salicornia - not a single other species of plant. No other birds save 1 marsh Hawk. No water, no sloughs, Salicornia 1½-3' high. Some singing, no juvs. At shore is sand, then scattered Salicornia & Spartina with bare mud between inland for 50 yds, then heavy contin Salicornia & Song Sparrows.

Napa: see map. Started ½ mi S town & mapped for 1 mi to little RR station at Napa Hosp. Walked on E bank - pure fresh H_2O habitat - Willow, S aeutus, Rose Foemenlum, Elder, blackberry, Typha, Artemesia etc. These birds all typical reddish Gouldii, in Great nos. along both sides - area 10 - 50 yds wide on each side - narrow on W bank. Extensive typha marshes extend inland to E all way from Napa Hospital to Suscol Creek - full of Song Sparrows - all gouldii. No salt habitat yet. Dutton's Landing - pure salt habitat, black birds, feed on mud flats. Amazing variety salt veg. Well dead.

Marshall, 1947

Melospiza

Mayl6 Napa Napa Co. Calif.

Foeniculum
S. acutus
This is 2200 yds S Napa Bridge on highway #12.
This point is 2200 yds S of Napa bridge of highway #12
There is no artificial bank on River to this point.
From here on S is raised levee.
No artificial bank to this point From here S is raised levee
Colk. 10 birds betw these points = 1¼ mi S Napa
Elde
Live Oak
Elder
Blackberry
Napa River
Napa

Marshall 1947

Melospiza

May 17 Corte Madera Creek, Marin Co., Calif.

Marshall, 1947

Melospiza

May 19 Cuttings Wharf to Stanley Home, Napa River, Calif.
clear calm warm. Cuttings wharf - pure
salt marsh → transition
to real intermed zone at
Suscol + Stanley → real fresh water
habitat above Napa State Hospital.
Coll 10 birds at circular slough
at bend of R at Stanley Home
— in mixed habitat - Rose,
blackberry, Triglochin, Scirpus 4sp.,
Carex, some Salicornia, Juncus,
Artemesia, Grindelia etc.
etc.

Coll 10 here → other gate 5 high

May 19

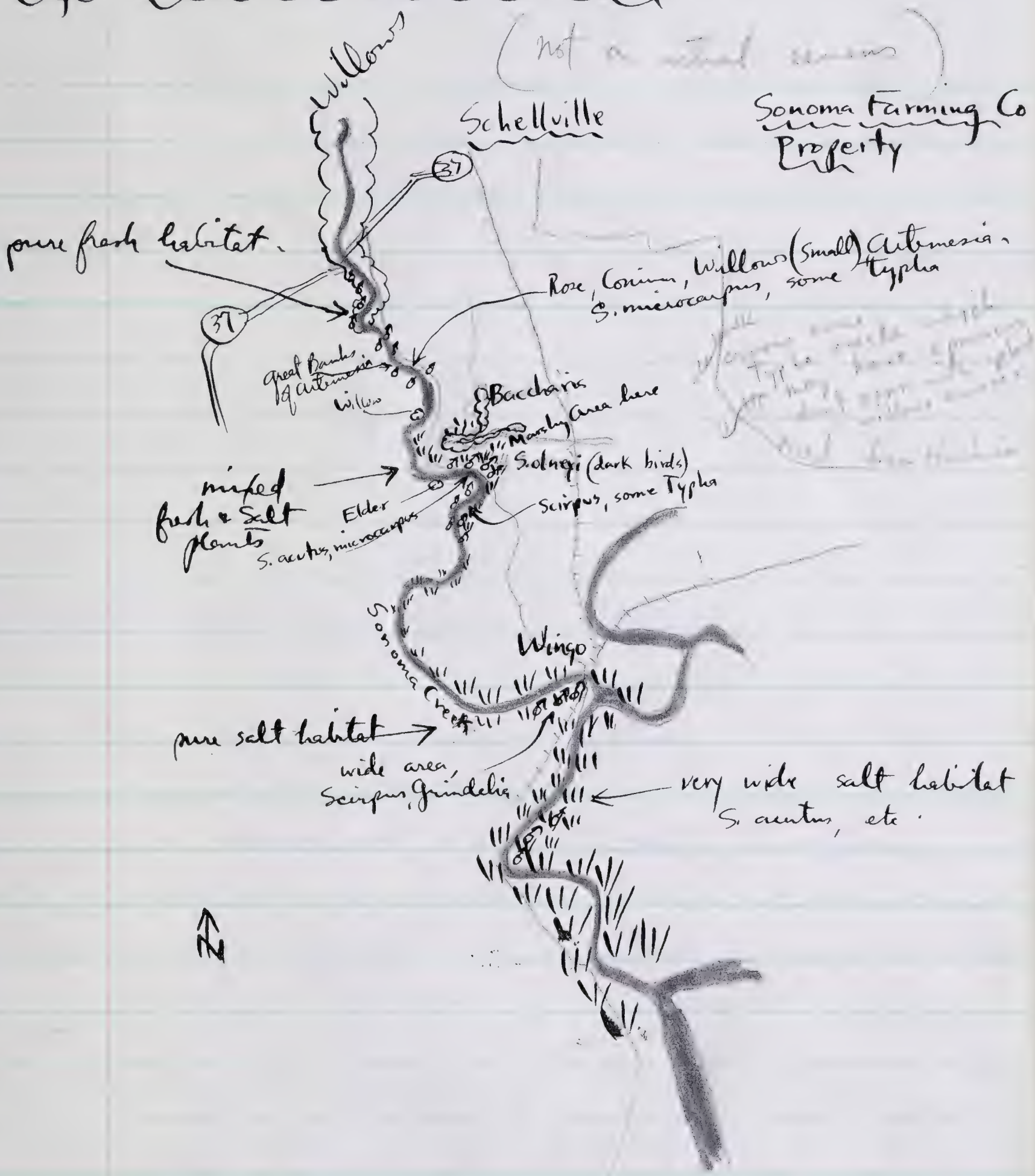
Napa River near Stanleytown

Marshall, 1947

Melospiza

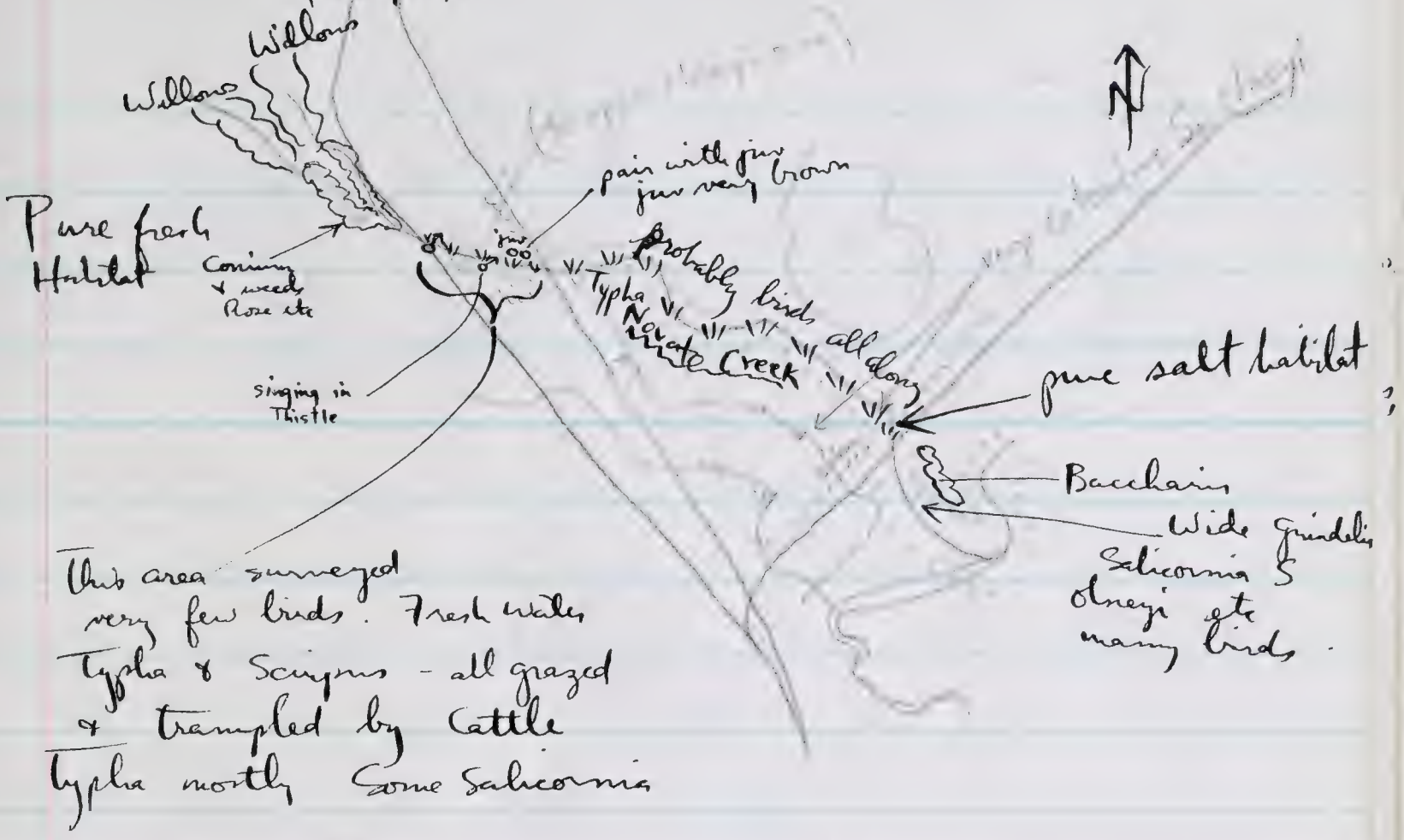
Melospiza

May 23 Sonoma Creek, Sonoma Co., Calif.



Complete continuity of habitats, exists as shown here, involves narrow belt of Scirpus (as narrow as 5-10 yds) in critical area, but plenty of sparrows. The area is largely disrupted from natural conditions by dykes, (but is less complex than Napa R, with all its adjoining Typha marshes.)

Meloospiza



May 23 Novato Creek, Main Co., Calif.

Seems to be complete continuity of birds & habitat here. This is surprizing, because in the area surveyed, is narrowest and least developed habitat for sparrows that I have ever seen which still does support birds. Due to grazing - watched cows cropping Typha & saw S. acutus all munched off. One ♂ singing (once) in that spotted pointed leaved thistle that grows on dry ground in pastures.

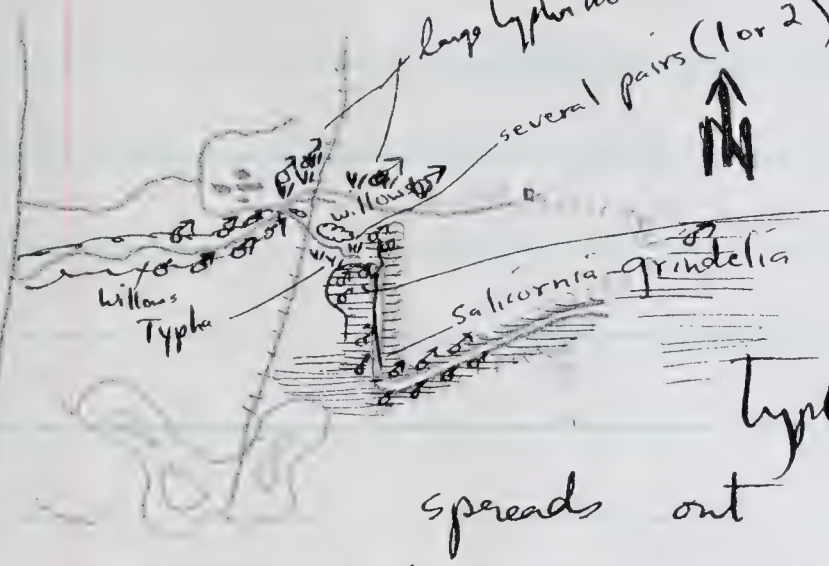
May 23 St. Vincent Station, Main Co. Calif.

See map next page - few birds singing, very windy, but junction of habitats established due to diversion of mouth of creek Willows just starting - with Typha few birds, but many birds in adjacent Salicornia

Marshall, 1947

Melospiza

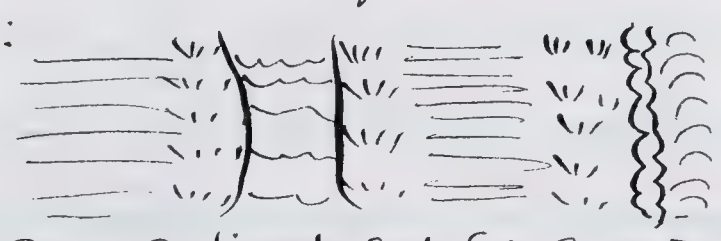
May 23 St. Vincents Station, Marin Co., Calif.



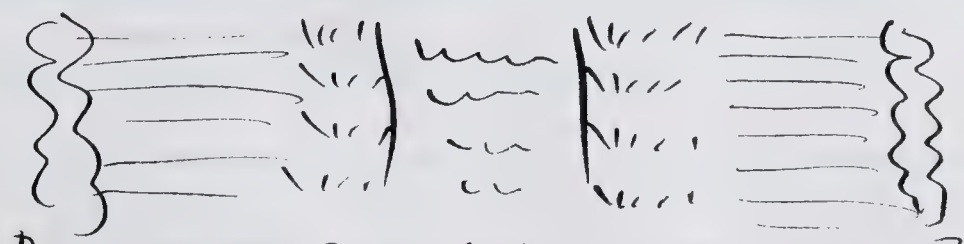
Typha marsh where is spreads out over several acres due to diversion of the stream. At edge of the circular ditch bounding the salicornia the fresh water "falls" a foot or so into the level of the salicornia.

101

May 23 Sears Point Road to Vallejo — mouth Petaluma Creek:



mouth Tolay Creek & Sonoma Creek



now a very brilliant deep green

Marshall, 1947

Melospiza

May Napa Area Summary

birds shown not in actual numbers

N

Town of Napa

Here continuous habitat from here to bay.

(12) Hiway

Surveyed

coll 10 birds here pure fresh habitat many brown birds

Pure gouldii at least to here

all Typh marshes all full of birds

drove

drove here

willows

big Typha marshes full of birds

extensive Typha many birds

surveyed

coll 10 here

mixed habitat

Suscol Hill gap of 200 yds between willow and Sc.-Typha

drove

Suscol creek willows birds?

Big Typha marsh Scirpus many birds

Carneros Creek

Solanyi marsh

Typha etc no birds

no birds here mature stream few willows - all great Maples, Oaks, Laurels

probably get gouldii influence to here

wide S. acutus along both sides.

Cutting's wren

surveyed

Bull Id.

pure Samuelis at least to here

last bird where willow & elder start.

pure salt habitat

pure salt habitat

Dutton's Landing visited Rich Salt Habitat many black birds

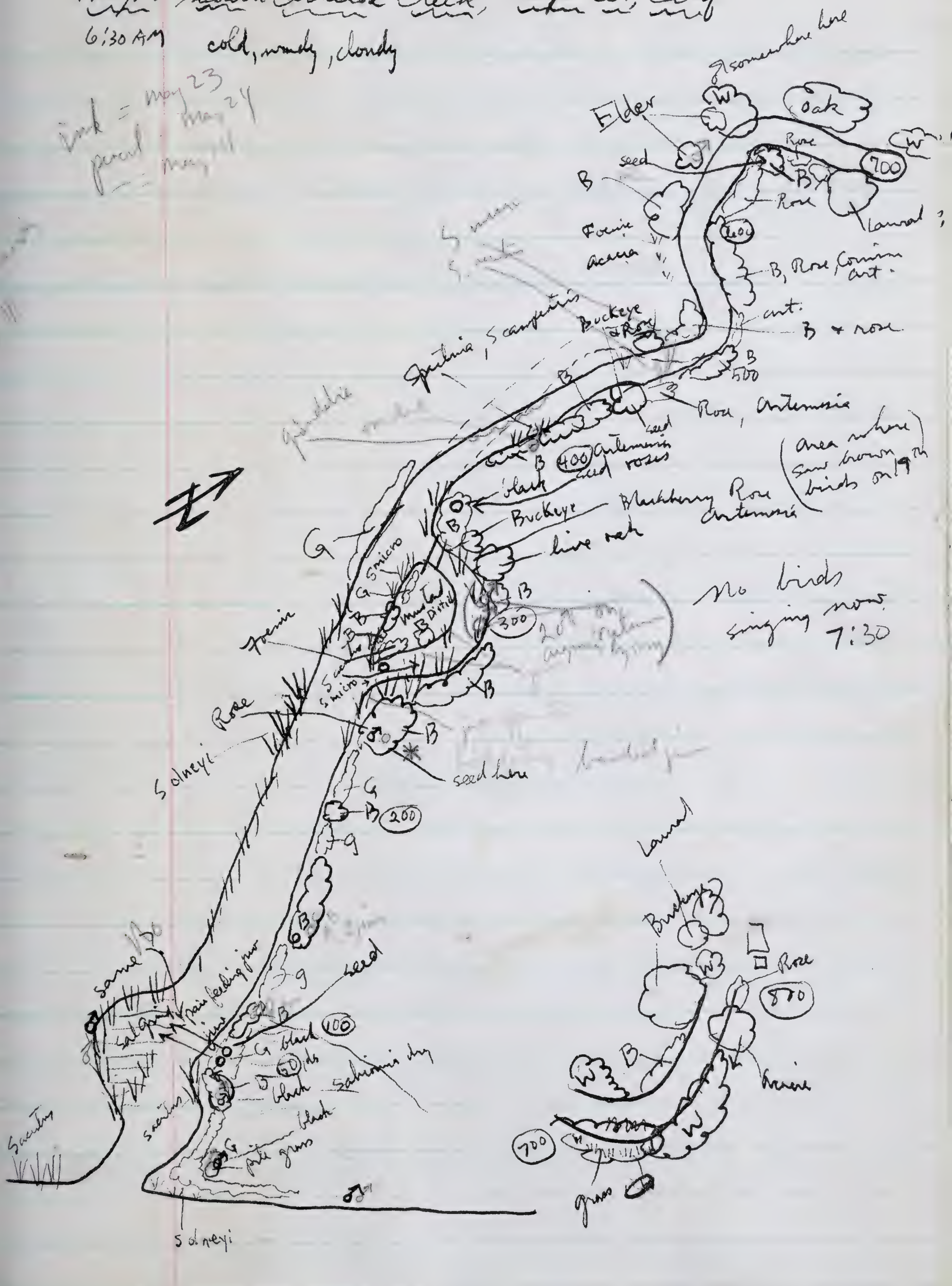
Napa River

Marshall, 1947

Melospiza

May 23 south Carneros Creek, Napa Co., Calif.
6:30 AM cold, windy, cloudy

Link = May 23
parcel = May 24
= May 11



See previous page for birds seen today put in peril. On this map no birds present – a more climax vegetation of large oaks tamals & maples. Dark below, steep banks, little cover, dry, no birds.

Talked to farmer here. His son protects Kites, shoots other hawks - had a red-shouldered hawk.

Last ♂ only 650 yds up stream where still tidal. Juv banded, see back of this page.

May 24, 1944

from [illegible]

black - very dark head + back
yellow belly

41 - 39550

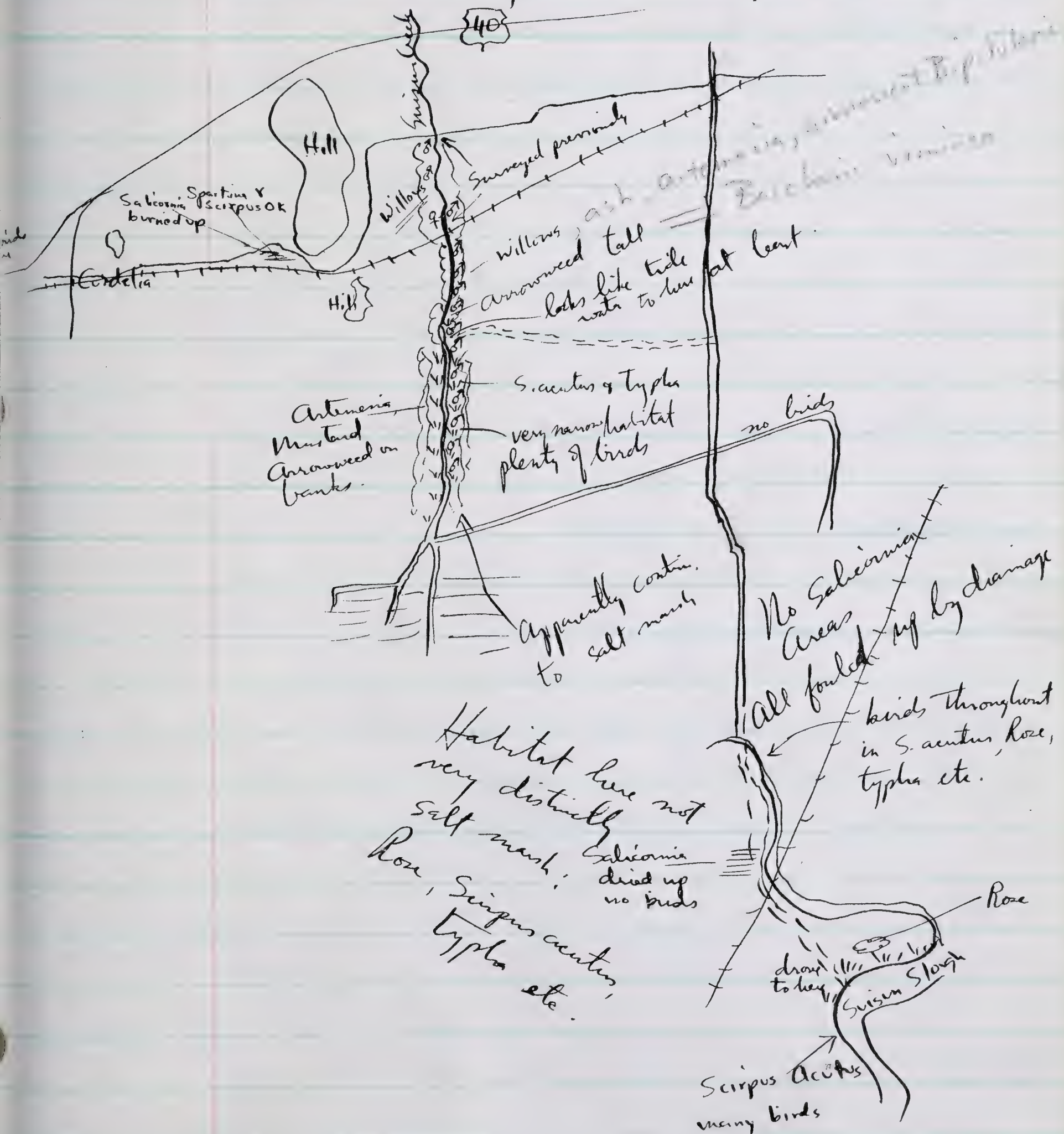
tarsus 2.1
bill 7.5
wing 59

Marshall, 1947

Melospiza

May 24 Suisun Creek, Solano Co., Calif.

when highway 40 crosses Creek looks like would have birds – surveyed area – is low successionally – willows predominant.



Melospiza

May 29 Alameda Co., Salt marshes, Calif.

All salt marshes from Roberts Landing south to Coyote Hills are the bunk — no natural conditions remain, they are used for sewage & garbage, the rest for salt works - & the salicornia burned off even the banks of the salt ponds.

The slough shown on quadrangle just W. Hayward station is man made & contains sewage, does not form contin habitat. However where SPRR tracks cross it just N Russell City, are some willows, Coronia, mustard ~~with~~ ~~bos~~ ~~cupids~~ acres in extent but at least 3 pr. Song sparrows — juves also seen. A very small isolated piece of habitat disconnected from any other birds for possibly a mile in any direction.

Johnson Landing — salt works.

S side San Mateo bridge road is farm with sm. duck ponds bordered by willows & S. canyonensis & Typha. This near salt works (where no salt marsh sparrows occur). One ss seen on edge this duck pond — an adult — brown, with heavy black streaks (sanctaecrucis) — another example of very small isolated habitat. Area big enough for 2 or 3 pairs possibly.

Drove onto salt works at Leslie.

Melospiza

May 29 Alameda Co., Salt marshes, Calif.

at 1/2 mi due South of Leslie is a ditch containing water & bordered with Cotinus, mustard, dock & many song sparrows. This habitat continues to habitat & population of the whole system of creeks & ditches along highway between Mt Eden & Alvarado — pp of course is santaecrucis. This at 1/2 mi S Leslie is however the western extremity of this population, for here the salt works ponds are - & some just being built. A patch of good Salicornia left, but tide shut off - mustard & grass growing thru salicornia & birds gone. This would have been a point of junction of habitats once before.

Further west, closer to bay the salt works country got a little better & I actually found ~~one~~ yellow song sparrows & many juvs in Salicornia on a natural slough area at "Derrick" (on quadrangle).

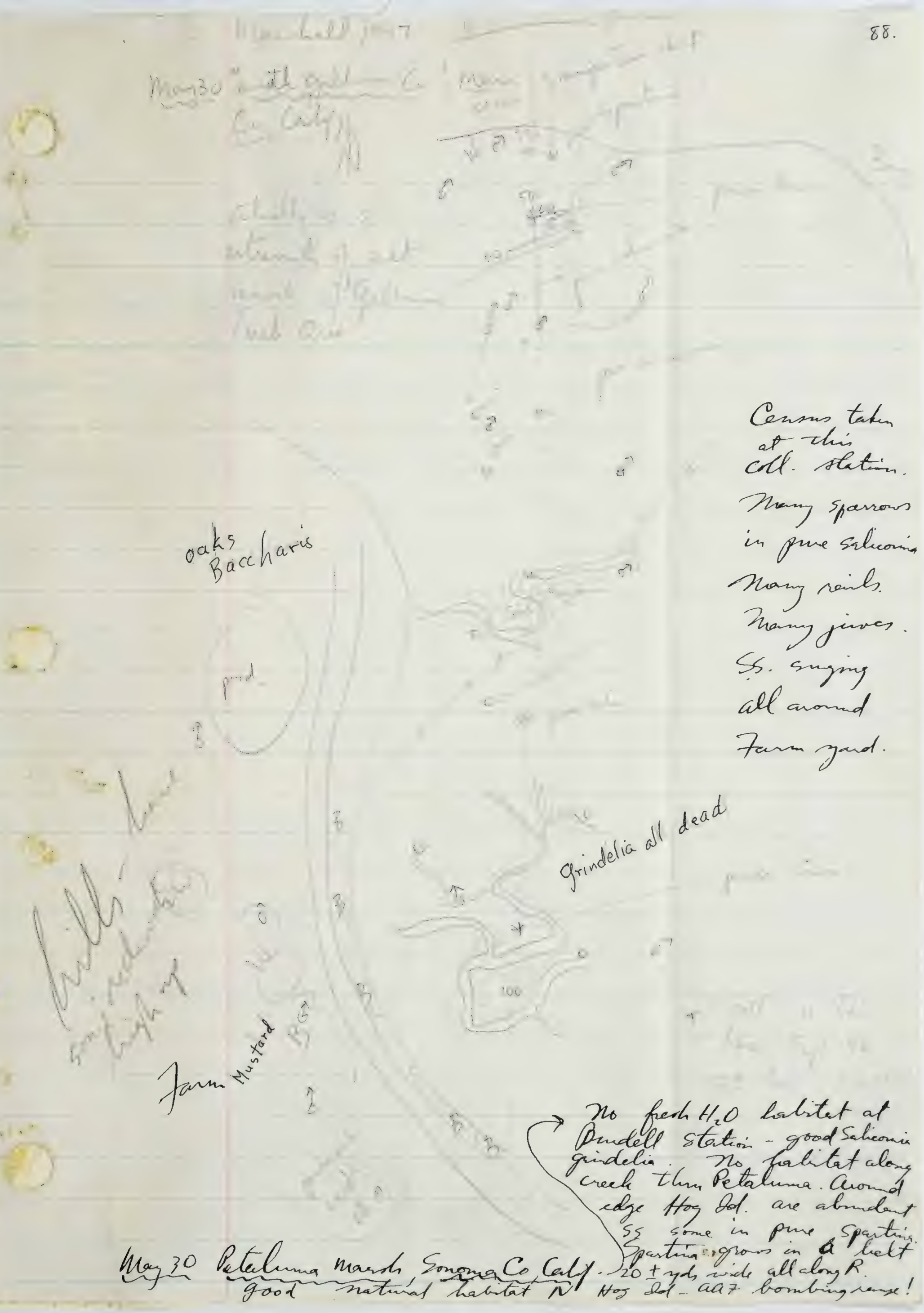
Went along Alameda Creek again & looked closely at birds — salicornia birds especially now, "Typha - S. mix birds" brown, white below. Began to see real yellow birds further down Alameda Creek — drove clear to "Windmill" — birds abundant on bldgs, roads

May 29 Alameda Co salt marshes Calif

driftwood, Salicornia-grindelia - good yellow
yuilluka. Alameda creek junction
with fresh-water habitat is all butched
up however by the building of banks
high enough to have Crimm & many
sparrows — also ditches with Typha-
these on either side of the original
Salicornia-grindelia slough. Alameda
creek itself now contains abundant
sewage & stink.

May 30 St Vincent Station Marin Co. Was going to band
birds at the typha-salicornia junction here
but find the creek has been changed to
flow in its old course - this will
obliterate the typha-willow area E of the
RR for - will probably grow up along
new stream. Might collect birds here
to see if any racial habitat preference.
the juvinals are going everywhere & taking
long flights - typha → salicornia grass
along new water course → hay field →
eucalyptus, etc. they are everywhere.
Did see one ad ♂ get chased out of
a salicornia territory (* see map) & it
flew back into typha.
A pond at Gallinas station has
willows & a singing ♂. Salicornia distant.

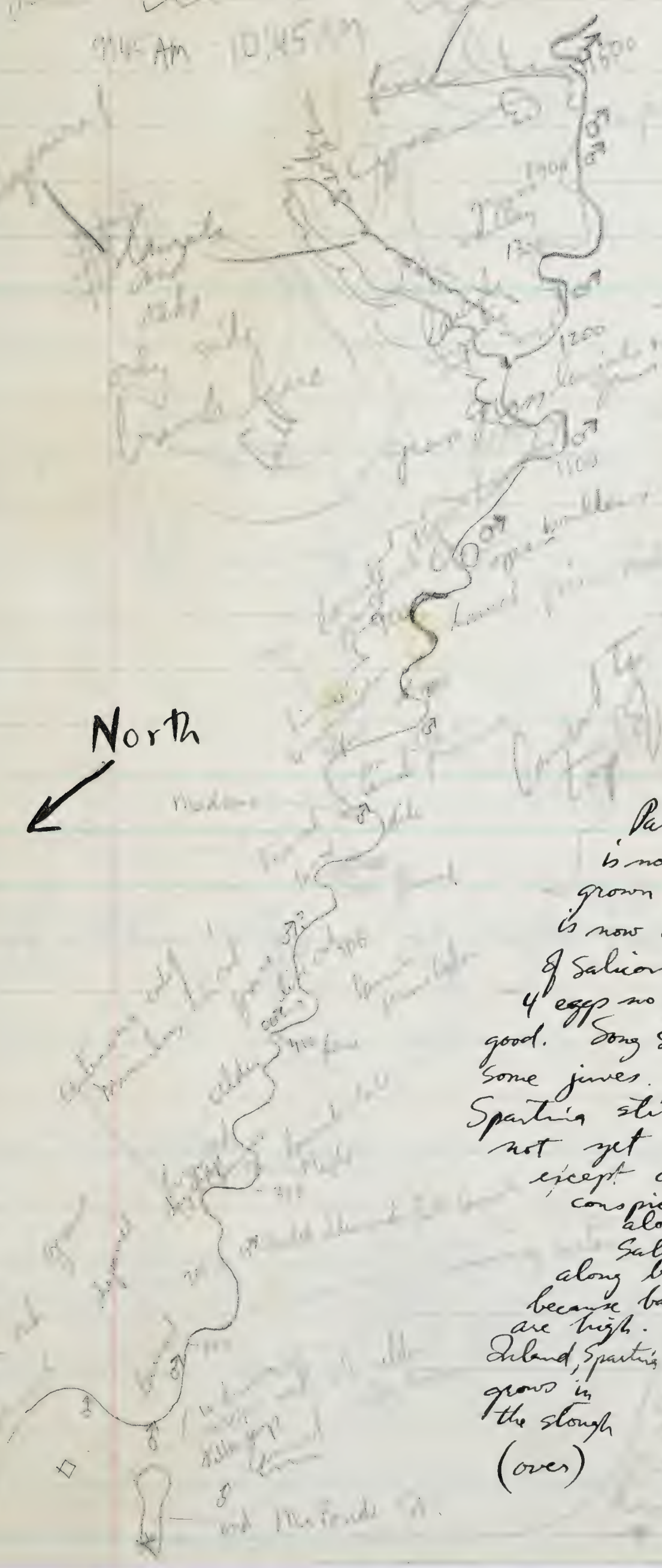
Note - on NW side of bridge across Naga R is [illegible]



Census taken at this coll. station.
Many sparrows in pure Salicornia
Many rails.
Many finches.
SS. singing all around Farm yard.

No fresh H_2O habitat at Bundell station - good Salicornia grindelia. No habitat along creek thru Petaluma. Around edge Hog Isl. are abundant SS some in pure Spartina. Spartina grows in a belt 20 ± yds wide all along R.

May 30 Petaluma marsh Sonoma Co Calif. Good natural habitat N Hog Isl - AAF bombing range!

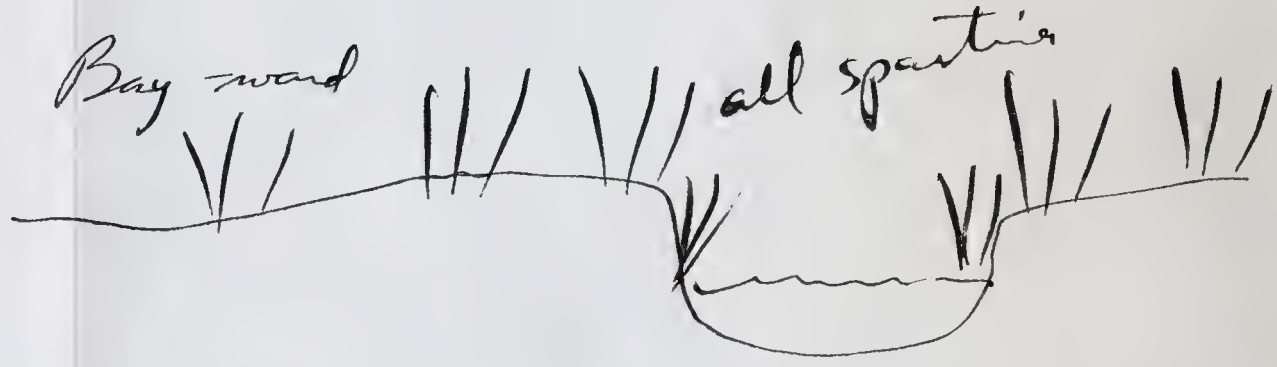


A few birds added on return trip. Not much singing. Birds widely spaced. Saw no jives.

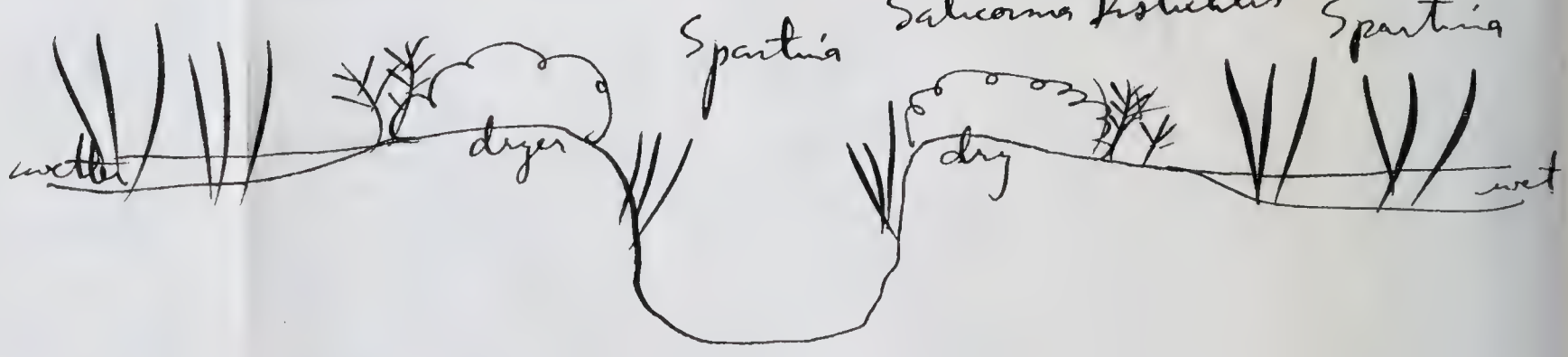
Drove back to San Pablo Bay marsh. Salicornia is now yellow-green & has grown several inches - Distichlis is now conspicuous around edges of Salicornia clumps. Marsh Hawk 4 eggs no good. Mallard - 3 eggs no good. Song Sparrows same as ever, some jives. Singing (noon) 0's. Spartina still brown (new growth not yet tall enough to show except along my transects where conspicuous. Inland Spartina along sloughs, bayward, Salicornia along borders - because banks are high. Inland, Spartina grows in the slough

(over)

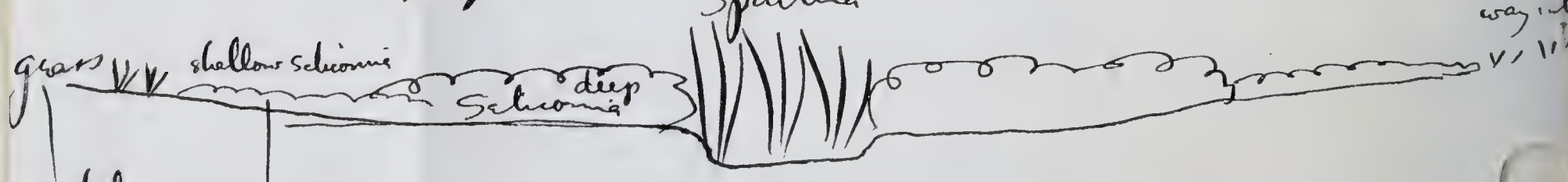
San Pablo Bay:



Intermediate
higher ground
higher banks



Inland
high ground



no tides
way inland

Some tides
~~one~~ flood it

Melospiza

June 5 Oakland Hills, Skyline Blvd., Alameda Co., Calif. Raing calm. E gate Tilden - a few ss in "soft chaparral" clear up to summit of N facing slope. At Redwood Park — no birds on E-facing & NE facing slope in redwood-madrone area. Heard several Hermit Thrushes here & a family & several pairs & single Chickadees On ridge of redwood park (S of Redwood Int) are many song sparrows — some feeding juvs out of nest — 3 or 4 within hearing — this is in the public picnic area — 2nd growth redwoods with poison oak blackberry etc. Not a natural habitat - yet hard to acct for so many ss. — Under redwood dumps, foraging in green low shrubbery around edges of redwoods.

March 1917

Monday

Mulligan

[illegible]

[illegible] extensive and continuous growth of brant-high Baccharis spaced 6 ft or so & low poison oak, ferns, etc in between — this on ridges — no ss. In gulleys get wetter habitat, Comm, etc & they are abundant 30 yds apart singing ♂'s all along the numerous wet finger-like extensions of wet habitat on all N-facing gulleys — appears almost like continuous population of song sparrows. But they don't carry over the ridges or S-facing slopes.

Area surveyed was about 500 yds S highway junction. Saw a large weasle - black face, white forehead, reddish-brown, black-tipped tail. Ran down bank (Baccharis) across road, sat up & watched me, poked around weeds at edge of road & returned several times to look at me.

Drove S along Cahill Ridge to Kings Mt Rd - finding no ss in numerous

stops in redwood co., openings in redwoods, swales open & with weeds etc. Now down the Kings Mtn Rd in understy of Madrone – Oak forest, not in bushy areas anywhere, nor edges of redwood forest (on meadows & streams).

Returned to junction with #5 & down Trinitas Creek Rd thru redwoods & Doug fir forests. Saw & heard a Hermit Warbler on terr. about 2 mi West of #5 – it was singing from top of Doug fir. No SS anywhere in Red wood forest – stopped at each creek, edge of forest where meets wet chaparral of high slopes, openings on ridges where Conium, etc. No birds until 1 2/3 mi NE Trinitas at lower edge of Redwood forest by logging mill – 1st pair there – also 1st Russet-backed thrushes 100 yds upstream. Here the redwoods petered out, willows & riparian growth flourished with no forest cover above – SS took over from Winter Wrens, Russet-backed thrushes displaced Hermit Thrushes. From here on to the coast Low Willow habitat & wet chaparral became broader & broader along each valley, willows growing far up N. facing slopes. SS everywhere in this growth. So we have very large pop. still restricted to

valleys, but considerably broadened compared to inland.

Drove from Halfmoon Bay up Pilarcitos Creek to where extensive Tall Coastbus chaparral -dry - no birds. short willow habitat with abundant Russet-backed Th & SS ramifies up every available gulley however & gets almost but not quite to top of range where wetter habitat with SS covers N facing canyon bottoms everywhere. (Still no general pop of SS over all hills.)

1 mi N Halfmoon Bay (town) saw 1 pr only excited about nest & one vagrant juv in Lupine back of sand dunes of beach. No others in hearing or sight for several 100 yds.

Stopped at little cove N side "Fog Whistle" Montara Pt. & saw in about an irreg. acre of ground between the Coast Guard area, the beach bank & cottages the real sea-slope habitat of lupuriant prostate vegetation incl. Angelica hendersonii, prostate Baccharis pilularis, Ericameria Castilleia ericoides, Rubus, etc etc - all uniform heighth & packed with SS. 5 pairs in irreg area incl gulley about 50 yd x 150 yds. 1 mi N Montara some more but narrow habitat ~~back of dunes~~ with SS. ~~but scarce owing to rains~~. Back at "Hills N Montara"

ie Hill 537 SS common but far apart owing to slides & cliffs on hills facing sea in good rich dwarf prostrate flora incl. prostrate Baccharis, Artemesia californica, A pycnocephala, Pteris?, etc etc. In valley on N side Hill 537 they go along gulley at bottom pr every 100 yds ~~with~~ & up gulleys on N-facing hill with Rb thrushes & Yellowthroats but also for a short dist inland in pure Baccharis (breast high), poison oak, Monkey Flower, 5 pr seen; 200 yds apart highest pair almost at top of ridge. (Nuttall Sparrows predominate) This must be the fringe of sea-slope habitat where still wet enough, but sparse pop. Common all along cliffs on w side Pedro Mt area where very close to sea & real sea-slope habitat, but far apart because habitat broken up by cliffs. Where hiway 1 turns east thru mts we get typical s/t chap again & Strawberry Canyon with ss along gulleys & extending a little way up from gulleys on N-facing slopes where scrub willows occurs.

Diplacus aurantiacus 2-41

At Edgemar – n side, spare ss in lupine – sand dune area. Only 1 seen. Many Wh-cr. sparrows. Some ss back of shore in Rubus – baccharis in grass fields on E side Hiway

Malaspina

Much good sea-slope habitat On N end peninsula in Military reservation - up to Golden Gate Bridge.

June? Marin Co. Muir Woods 6:30 AM - Last pr. SS is 50 yds upstream from start of park (Redwoods). From then on for a mi at least no birds Last R-b thrush about 150 yds up stream. Hermit thrushes & Winter wrens then take over. Riparian Habitat good but shaded over by redwoods. SS every 40-50 yds from end of redwoods downstream where plenty of light. Called up Spotted Owl at sitting on top broken Redwood 1st tree to rt of sign for Nature trail. Did a lot of low barking & whistling.

When hiway goes E along N-facing slope N side muir Beach counted SS in Baccharis area - very wet (Heracleum. Poison Oak, ferns, Rubus, etc.), but grazed. 6 ♂'s in 525 yds from N-most bend to summit to West. This count made from both sides of rd. - bds don't get to top of ridge when dries; just wet enough on this slope to simulate gulley type of wetness. More birds or cliff facing ocean & down in gulley itself - (Poison Oak, Heracleum etc.) they seemed to spill a little out into the Baccharis from these 2 habitats. Spotty sea-slope habitat all along from here to

Baccharis, Ant. calif., Ant. pyrenocephala

Stinson beach, but interrupted by cliffs & willow-gulleys (with Rb thrushes & the usual willow-ss.). Salt marshes of Bolinas lagoon (s end) are of very low salicornia choked with Distichlis & not good for ss. Much Grindelia around (no foliaceous banks); (camporum?) edge salt marsh • one ♂ in dump of it- it did not forage in the salicornia (too dense & low - less than 1 ft).

Very abundant in willows all around lagoon. Also wide willow habitat with marshy juncus areas all along rd to Olema.

At narrow salt marsh at extreme n end Drake's Estero, Song sp common along the sloughs (glabrous stemmed, serrate lanceolate-leaved Grindelia robusta marituma lines the slough), salicornia is deep, & choked with Distichlis & Frankenia. Salicornia turf overhangs sloughs with flat mud banks & several pairs seen foraging along the mud, flying to grindelia etc. However, these birds all within ten. dist. of surrounding fresh-water soft chaparral- Rubus etc, but one pair seemed to be established on the slough - also juncs.

Nucleoprize

June 7 Pt Reyes, Marin Co., Calif.

Covered entire sea-slope & dune area on NW part of Pt Reyes. The Coastguard reservation is fenced off & protected from cattle - outside of this, song sp only in wettest gullies, & strangely absent from lupine habitat which differs from Coast Guard area only in having bare gnd or cropped grass between lupines instead of the mat of rich veg. Example: 1 ♂ in 1200 yds in grazed area along e-w road; then at beginning of fence & ungrazed part - same lupine habitat: 6 singing ♂'s in 450 yds - might have been more ♂'s not singing, as very rainy. Here we have SS & Nuttall Sp in = nos because of larger feet, larger flight range & slightly fewer Savanna Sp. The latter 2 outnumbered SS in grazed area. Obviously the grazed area was a waste of time for studying SS habitat.

The main SS census was in rain along N-facing ridge just above the cliffs where steep (below read) but good vegetation - Here were 7 pairs in 300 yds & good continuous habitat (5 singing ♂'s, 2 other pairs, many pairs additional). This habitat on N-facing slope at edge of sea-cliffs consists

of a primary important Lupinus arborens
½-4 ft high, these forming hemispherical
structures edge to edge in chains
bushes touching (stems 3' apart) or
with gaps (stems up to 9 ft apart)
the chains or wider spaced bushes
enclosing areas of thick veg 1 ft
high a more, very moist & with
pt perfusion of flowers of all kinds, &
several grasses. Angelica ~~or~~ hendersonii
(Umbelliferae) 22" is spotty, Chlorogalum
pomeridianum 6 sap plant 2' (Liliaceae) also solitary
every few pls and a 1' bunch
grass grow solitary & independently.
S'outr grass, a gourd (Echinocystis fabacea) (Cucurbitaceae),
Pteris aquilina (fern), Orthocarpus, small
Rubus, Eschscholtzia californica,
Ligusticum apiodorum (forage - Celery-like)
together with numerous other flowers
& succulents form the mat between
Lupines. (There are a few more
strange incl Grindelia robustum Compositae which are perennial
independent bushes but not common right- here
more so on cliffs). Conspicuous elements
are Achillea millefolium maritima 18"
(Common Yarrow — Compositae) & Achillea
Stachys californica 20" (Labiatae) which
recline against the lupine & mostly grow

Also the abundant Grindelia robusta maritima prostrate stems very (hairy) oval, leaves entire

up thru the lupine). On actual cliffs, where ss also occur in the continuous mat of veg — Lupine does not occur — & thru there is less grass also. I didn't study that particular habitat (which is found on the trail down to Murre Rocks). However I did find a habitat where Bds are certain — resembling structurally a Salicornia — grindelia marsh, pairs 40 yds or less apart.

Do birds extend ~~#~~ certain along coast? N of the lighthouse?
More or less but not so good now because of grazing — would be sufficiently, well OK if not grazed. Stopped at a level plain further N with rich stand of Ericameria ericoides (mock Heather — Compositae) & Baccharis dotting the plain = with no ss; but numerous White-crowns & Savannahs. Hiked along road in area of "Blacksmith Shop" & ~~#~~ noted 2 at least ss singing 50 yds up N-facing slope — 50 yds above the stream — they may have been close to an "edge" or ridge above — this a very tall dense soft chaparral, poison oak, Rubus, Baccharis & I think too dense & high for certain pop. ss sparrows.

Veg List:

Sea Slope Habitat:

Montara:

Baccharis pilularis (prostate) (Compositae)
Angelica hendersonii (Umbelliferae)
Ericameria ericoides Mock Heather (Compositae)
Artemesia pycnocephala 16" or prostate also Mtn Re
Castilleia Paint Brush (yellow)

Monkey-flower
Equisetum
(Grass, Juncus)

Pt Reyes

Eriophyllum staechadifolium } dissected leaves, yellow flowers
Eriophyllum nudum } Compositae
oblongifolium } woolly

Lupinus arboreus 2-6' yellow
Angelica hendersonii 22" (Umbelliferae)
Chlorogalum pomeridianum 2' (Liliaceae) Soap Pl
Achillea millefolium maritima 18" Common Yarro
than Lupine
Stachys californica Hedge Nettle then Lupine 20"
(Labiatae)

Plains - Ericameria ericoides Mock Heather
Compositae

Ligusticum apiodorum (Lovage) Celery-like 16"
Eschscholtzia californica Poppy
Small Rubus
Cucurbitaceae (Gourd)
Pteris ?aquilina? fern
Orthocarpus blue (Owl Clover)
Grindelia robusta maritima (leaves oval entire
stems hairy)

Marshall, 1947

Meleipsa

June 10 Strawberry Canyon, Alameda Co. Calif

Clear breezy cool good wind

(Over for [illegible])

Dixie Places

Baccharis pilularis
Coast Oak Rhus diversiloba
Artemesia californica
Diplacus [illegible] (Monkey Flower)
Rhamnus [illegible]

Off past Chaparall
Canyon Oak, Elder, Artemisia vulgaris, Heuchera
Ribes [illegible] (Chaparall Currant)
Phacelia
Hyperacanthus capitatus Nine Bark
Heteromeles (uncommon) discolor Coast Brush
(Vaccinium ovatum Evergreen Huckleberry)

Ribes sanguineum

Marsh Plants

Berkeley Aquatic Park

Scirpus californicus — bristles plumose, stem terete

" ~~fluviatilis~~? — 4?[3] bristles, stem 3-angled

Typha angustifolia — ♂ & ♀ flowers separated

" latifolia — ♂ & ♀ flowers contiguous

Baccharis pilularis

Grindelia camporum — sm. leaves, bracts with slender recurved tips

Salicornia ambigua "Pickle-weed"

Heracleum lanatum "Cow Parsley" — Foeniculum vulgare "Sweet Fennel" ("wild parsley") leaves decompound dissected into numerous filiform segments. Flowers yellow

Juncus balticus "Wire Rush" flowers greenish

Rumex crispus "Curly Dock" callous

San Pablo marsh

Spartina foliosa — Spikes approximate forming cylindrical inflorescence

Fresh Water Streams:

Acer negundo "Box Elder" leaves pinately 3-foliate.

Conium maculosum "Poison Hemlock" purple marks dotting stem

Artemisia vulgaris heterophylla "Calif Mugwort"

Rubus vitifolius "Calif. Blackberry"

Populus fremontii "Fremont Cottonwood"

Salix "willow"

Rosa californica "Calif Wild Rose"

Simple dicot C

Simple alternate

opposite

yellow-green

Solitary or in cymes

Simple, lobed or palmately

lobed

bracted

Simple

covered in

covered of tomentose hairs

Field Mint.

Mule Fat

Baccharis viminea

Triglochin maritima Common Arrow G

Dutton's Landing; Cordelia slough

Marshall 1947

Melospiza

June 10 Berkeley, Strawberry Creek Calif 11 AM - 12 M

Salvanus much in evidence feeding at least 8 pr in 400 sq yds x 80 yds area probably 10 — 8 Tow in Aesculus middle. Some singing — regular song perches — stumps, tallest granules, fence post, taller rushes. 1 pr. adult flushed from Salvanus 12' away from Gambelii. 1 pair flushed from middle of bog Salvanus area 25 yds from Gambelii, 1 where we first saw Salvanus also 1 pair flushed from Salvanus from Gambelii & disappeared into Salvanus. Others getting into Salvanus from Gambelii. Never any from Salvanus never perch in or fly always to marsh line of Gambelii. The change of Artemisia vulgaris the petal of S. Bairdi & Cinquefoil as the rushes at edge of stands. When chased Townd pair Salvanus fly out around & back to Gambelii. No adults flushed from 400 sq yds of pure salvanus (x 40 yds) in several trips. Seem to forage on ground, because of the redominant veg but mainly perches on Gambelii along edge of marsh.

June 10 Bianca, Solano Co. Calif. I was better aware of ten. Its harsh song compared with other songs, trebles used by each bird, & longer than usual matching song. One bird will sing the adjacent or from nearest ten. He will sing on his nearest perch & sing 1 or 2x facing the 1st bird, then a short song out of his ten. Sometimes adult fly over or to another ten & get chased out (with or followed by song) even when owner not on perch.

The big bird & dark chestnut head = common in the field.

Marshall, 1947

Meleagris

June 10 So Thompson Bay, Solano Co., Calif. 12:30 PM
♂'s singing in S. acutus & Olneyi at Spencer's just as originally as 3 mi. SW. On marsh at N end airport (part main Swing & into main gridelia) are large areas of pure deep (knee high) Salicornia with juvs & ad. more than 100 yds from gridelia sloughs tenders. ♂'s sing from Salicornia, birds fly from place to place in pure Salicornia & "go under" it for forging. Ad's seen in Salicornia carrying food. Some birds (ad & juvs) far out in Salicornia flats, but 2 (1 50 yds 1 100 yds out) seen chased back in several steps to gridelia. All Salicornia swells watered & luxuriant along the main slough & gridelia on broad belt 10 – 25 yds wide – at edge & occas, but many wide shoots with Salicornia + Distichlis in between. At edge & slough go 1 to 6 ft, 5 acutus, 5 Olneyi, 5 compestris. On raised edge (achillea yarrow) & wild Rose (Rosa Californica) ± 2 ft. Salt & Pt Reyes type) weeds. This is the richest habitat & densest ss I've ever seen. Birds are everywhere, esp along sloughs

Melospiza

June 10 Southampton Bay, Solano Co., Calif

100's of ♂'s singing, over all mud flats flying back & forth from surrounding areas, but most of singing or nest birds (95%) stay along the slough & forage on its mud banks.

At E edge of marsh is some extensive cattails. Juncus. This has no ♀'s as strong ones too cold together & it blows down & form a dense protective mat. — Other birds do not have the temporarily large tail & many are light colored.

June 10 Martinez, Contra Costa Co., Calif

On road from Crockett to Martinez, which goes along the strip S side of Carquinez Straits, noted birds in almost all canyons, especially from Port Costa to Martinez — three ♂'s heard from one. Several of the canyons have little reservoirs with Hydra & Song Sparrows — these have willow, alder, elder, etc. & with song sparrows. At the salt marsh on W side Martinez there is a valley that adjoins the marsh — where mounted in trees etc. Tall willows even back the on S side. Tracks with several ♂'s singing

Thalassina

June 10 Marking Tide Calculo, Calif.
1 ♂ singing in Taxle, Bankam & Ferris
Oak in the gulley 200 yds from mud-
night by road. Su there a
certain # up these canyons from the
salt marsh. The marsh itself
is mostly great tracts of S. campestris
with flats of dense Distichlis tufts
between them. Buds not singing
much here. The top is mud

Salvinia

June 11 Grizzly Bay 3 ♂♂, 2 ♀♀ & 2 juv
No spec. nests found - all dismantled
& gaped. Ex. restricted to slough
banks of S. maritima, mud and adjacent
tracts S. olneyi & campestris. No
virgin Salvinia nests found.
(Low & Heil told of extensive
natural Salvinia in Grizzly)

Melospiza melodia

June 27 Southampton Bay – Song Sparrows still singing in all areas.
June 28 Grizzly Island, Solano Co. Calif. Spengers.

Camped night of 28th on W side
In this semicircular concavity on the west edge of Grizzly Island is what appears to be the original marsh growth – from bay edge in to the 1st ditch or levee. In some places this original growth is several hundred yards wide. It is all composed of tall Spartina [crossed out] Scirpus type with other Scirpus and Typha with millions of Song Sparrows. generally 6 – 12' high Never is it Salicornia – Jaumea 1' type of St Bay marsh. At edge of bay is narrow belt of green low (1 – 2') Spartina [crossed out] Jaumea. (Is Spartina there too?) Inland from the levees are some places still not completely drained neither do they have a tidal flow. There may be great patches of Salicornia, acres & acres 1 – 2' deep but on dry mud or with stagnant pools & really not comparable to SS habitats. No Song Sparrows seen. Many Savannahs however. Song Sparrows get a ways into such places only along ditches with water & Scirpus – Typha. One seen in some extensive Jaumea-Salicornia but likely near such a ditch. Rose & Yarrow

Marshall, 1947

Melospiza melodia

June 28 Grizzly Id, Solano Co.

♀ some Grindelias & weeds grow on the levees, Frankenia etc, & since these are adjacent to the Scirpus & the original bay marsh, these are ss. in them. I dont see how the roses could have been an important feature of the original habitat however; it was probably mostly tidal.

We drove all around the island ♀ found no other habitats except as above. Song Sparrows occurred in immense nos wherever there was Scirpus & Lycia & Rose & wetness. Ad♂s were still singing some, & juves were everywhere. Sparrows constantly spilled across levees into the hay fields - some ad ♂s sang from baled hay piles 4 ft from probable actual ters.

July 1 5300' Nth of Pearis Ridge on mainroad halfway between Middle & South Forks of Silver Creek, Eldorado Co. Calif. A meadow here in the middle of "Transitia Zone" forest had patches of willows & alder scrub over wet ground, juncus, grass etc & had at least 2 pr. Song Sparrows, ♂s singing. Also many

Melospiza melodia

pairs of M. fasciata ♂'s singing. The 2 species seemed to be on same territories, & I could distinguish ~~little~~ no difference in their tess. except ♂ Songs sang from 3-6' in riparian growth, while fasciata's would often sing from 10 or more ft in sm conifers (Eucalyptus pines).

July 7 Anaheim Bay, Orange Co. Calif. The salt marsh area is of several sq. miles here & looks natural - untouched by dykes & levees - regular tidal sloughs wind around the flats. The vegetation is all very short & supports no song sparrows but many Savannahs. ∴ the absence of Song Sparrows is not proof that cooperi is not adapted to salt marsh - merely that the salt marsh growth here is not high enough for them.

High tides seem to cover all the veg - this may be important - also in absence of Song Sparrows - ~~none~~ veg. is tall enough for nests. The flora consists of Spartina less than 2' tall along sides of sloughs & unique peculiar growth of small individual erect plants on the flats, the general level of which is less than a foot high. These plants are Distichlis, Triglochin?, Frankenia, Salicornia, Jaumea.

Melospiza melodia

July 7 Anaheim Bay, Orange Co., Calif.

Occasionally there are little round bushes of Suaeda 1-1½ ft high The entire thing looks like a very miniature SF bay salt-grind marsh with the Suaeda taking place of Salicornia. The variety of plants (& principal species) is noticeable.

Flora:

Spartina foliosa ? (not in flower) 21" tall at water's edge, up to 32" in deeper water graduated so that all of same level as the top of the cover on the flat as if the whole had been clipped.

Distichlis spicata ? (not in flower) usually rare & low but up to 13" at edge of sloughs.

Triglochin striata ? (not in flower) 7" high on flats only. erect

Limonium commune californica leaves basal, Scape 15", on flats plants far apart.

Frankenia grandifolia 5" high individual straight erect solitary stemmed plants.

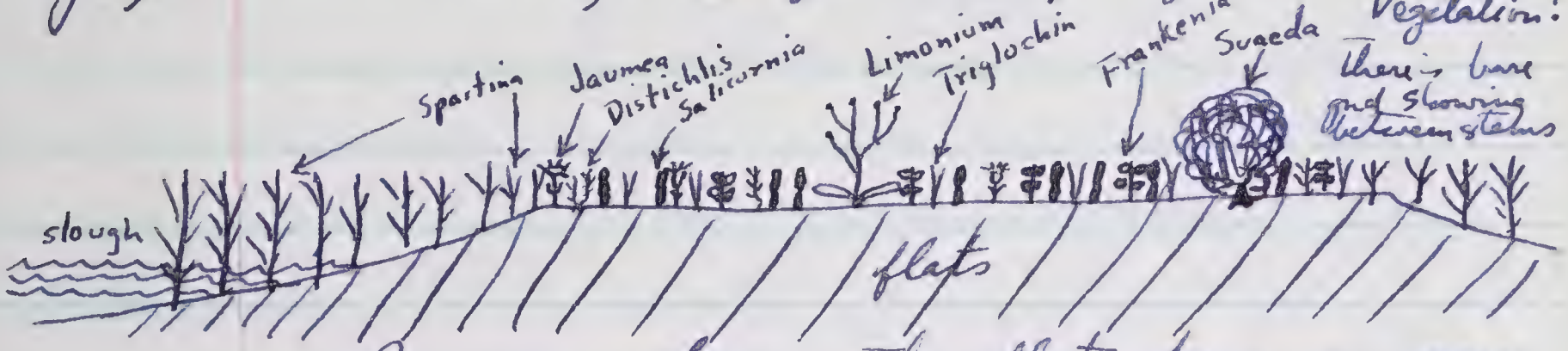
Salicornia ambigua solitary erect stems 6-10" high, mostly 6".

~~Suaeda~~ Suaeda californica bush 1-1½' high solitary - far apart

Jaumea carnosa 5" tall erect solitary.

Melospiza melodia

July 7 Anaheim Bay, Orange Co. Calif. Growth Forms of Vegetation:



In some places the flats have a more abrupt slope into the slough & lack the border of Spartina in which event there is a mud bank upon which Savannah sparrows forage. Savannahs perch on the Suedas to call or sing. No yellowthroats, No tule wrens Rails?

About a mile inland I found a patch of about 1 acre of Salicornia sheltered by a levee and on uneven gnd caused probably by dumping dirt. It was up to 30" high & very thick & continuous. Frankenia also in great mats up to 2' high. Many Savannahs, too local & restricted for song sparrows - shows that Sal. can grow higher under non-natural conditions.

July 7 Mouth Santa Ana River, Orange Co. Calif.
A slough extends W several hundred yds from the river mouth on the N side of beach highway. Slough not natural - is dyked in & looks like dirt dumped here. Nevertheless all is covered by huge growth of Salicornia up to 3' high continuous except around edges where dug

Marshall, 1947

Melospiza melodia

July 7 mouth Santa Ana River Orange Co. Calif.

salty ground where Savannahs fed. Salicornia pure over much of the area — several acres — except for occasional mats of tall leaf Frankenia. The slough had high banks undercut & the Savannahs fed in nos. along the mud borders, on driftwood, & under the overhanging Salicornia sod. I have never seen so many Savannahs, many juvs, many ♂'s singing. They go in great droves — may be none in one part of marsh & you look to the other side & you can see 20 scattered around within ½ acre all on tops of taller Salicornias. I never saw them go from a perch down into the sal. but saw some hop among the top foliage feeding. They are so curious that they stay up to look at me, then fly. However, the must have been foraging under the Salicornia, because they were constantly popping up to perch from nowhere. All I saw foraging were on bare ground or on the mud banks of the slough. I found 2 Song Sparrows among them — one was perched 6" from a Savannah on a

Melospiza melodia

July 7 Mth Santa Ana R. Orange Co. Calif.

Salicornia clump. I approach and it gave alarm notes & retreated a way but stuck pretty well to a territory (Wasn't found there ½ hr later - but they do not respond this time of yr. very well to squeaks - so is no proof it was not in vicinity) This bird was ad ♂ seemed to be a ♂ perched high. Another taller mouthing bird was ♂ yg - seemed to be ad also & perhaps the ♀ mate - stayed near the 1st. They were definitely foraging under the Salicornia. But there were some Baccharis-like bushes & Arrowweed near the highway that they may have operated in also.

This proves - altho not natural habitat, that Coryi can live in Salicornia, if deep enough. Rare because of yellowthroats & Wrens.

July 7 Newport Bay, Orange Co. Calif.

(Area at side of hiway (n side) filled in now has willows) Upper reaches still natural salt marsh habitat winds for several miles up to a salt works. Then a big area of salicornia, then a big dam-like fill

Marshall 1947 115.

Melospiza melodia

July 7 Newport Bay, Orange Co. Calif.

Then extensive farms, fresh H₂O marsh, Scirpus & typha, willows, with Marsh Hawks, Song Sparrows, Yellowthroats probably marsh wrens. Below the fill the creek is sty. & receives tidal water - flats have dog Salicornia & Chenopodium weeds in masses up to 3' tall or 4' & Scirpus "microcarpus" = calif? along ditches. typha & S acutus in one place

There were Song Sparrows here but not abundant & they got pretty far out in Salicornia but mostly only to fly from one patch of Scirpus to another. Total of about 4 birds seen. They do get in a salty environment.

Below the salt works & from there to the mouth of the bay, the bay water is vivid & the flats very low & gradually sloped so there are few flats high enough for anything but Spartina. Spartina occupies almost the whole ~~bay~~ sides of the bay. It is short & doesn't have song sparrows, wrens, nor yellowthroats. Only numerous Savannah Sparrows - feeding on bare mud. Spartina doesn't grow very close together here - mud between

Marshall 1947 Melospiza melodia

July 7 Newport Bay Orange Co. Calif.

stems. A road winds along the E side of the bay; Spartina on bay side, palisades on E, at valleys of which water backs up from road & we get occasional patches of tules — these of exceptional development:

One such place had at least 2 song sparrows Scirpus acutus 14'4" Typha latifolia one leaf 12' plants 15-16' apparently fresh water.

Another — Scirpus olneyi pure stand had a ss in vicinity 7'5" high

Another - 1 ss in Typha (narrow ditch) on E side road, clump of giant Scirpus campestris 52" high diam of about ~~25~~ 20 yds on high gnd at edge bay — saw one other such clump - neither had ss. too small. By this 1st clump were some Spartina foliosa in flower 4' tall - not enough area for ss.

It looked like some of the flats on other side of bay were higher & had some growth as Anaheim Bay. On my side, higher ground ~~would~~ to ~~be~~ very narrow edge & would occasionally present deeper

Marshall, 1947

July 7 Melospiza melodia
Newport Bay, Orange Co. Calif.

veg but too limited extent for ssp.:
i.e. Salicornia 2 ft, Frankenia mats,
Distichlis up to 15", Juncus in
mats 9", Juncus? with ✳
sharp points 34" radius.

There were flats which 2
covered which were just like
Anaheim Bay. Spartina very
extensive however usually belt
25 or more yds wide along bay—
~~top~~ 10" or so high, ~~taller~~ where
submerged up to 21" not yet in
flower. Last years stalk on
lower edge were about 32".

The whole place insofar as
natural areas are concerned is
same as Anaheim bay except
god lower & more Spartina &
less flats; a home for
Savannah sparrows. No place for
song sparrows — only in unnatural
~~the~~ pockets of higher growth due
to accum. of fresh water due to
roads, etc. But some of latter
salty with a few sparrows. Coopers
OK for salt habitat. Saw
a White tailed Kite. A patch
Villows n. salt works dry — no sparrows.

Marshall, 1947

Melospiza melodia

July 7 Bolsa Bay Orange Co. Calif.
A creek mouth here had extensive tall Scirpus ~~acutus~~ (“microcarpus”) & typha with many song sparrows (though these speak up rarely now & sing). There spilled out across the narrow bay to Salicornia pumila flats with growth about a foot high in mats interspersed with Limonium 2" Distichlis 5" & this sharp-pointed round "Juncus" bush. Actually 2 birds seen in this latter place & they went up to reeds & tobacco on road bank. Seemed to be wanderers from Scirpus "micr" area Because the veg here was pretty short & packed with Savannahs.

July 7 – Then observations made from 11:30 AM – 4:30 PM.

July 11 Oceanside San Diego Co. Calif.
1st River mouth SE Oceanside ~~st~~ stands as bay inland just like Newport Bay. Canyon opens into this bay. ~~Lea~~ Canyon has sm. creek & marshy areas with peculiar mixture of fresh & salt plants – large patches Salicornia, S. otayi mixed with Cut. vulgaris? Juncus, willows, typha, etc. S. "microcarpus" found 2 song sparrows

melospiza

July 9, 1947

July 9 Dickey Collections

Heermann Song Sparrow Notes:

gouldii

Pt Reyes = Pt. Reyes Station Marin Co. Nov 13, 1917 E574, E575, E576, E577

in dense tules

notes sound like he means Pt. Reyes Station got a yellowthroat there labelled Pt Reyes Station

Pt Reyes Station Nov 15, 17, 1917 "brush piles"

11 birds E 581 – E587

E 594 – E601

mapillaris

Cordelia, Solano Co. Oct 5–10, 1917

"Camp near railroad within stone's throw of Cordelia. 100s acres tules marshes to south overrun with song sparrows. Again many of the Sparrows look like intergrades -- damn!"

E 418 - 424, 426 - 430, 434, 435 - 436, 438, 445 - 446, 447, 449 - 452, 456.

pusillula AB Howell's notes Oct 4, 1916

Alameda Howell got 12, Lawrence 16 Camped in Alameda Co. Barn near town – they went out on the marsh near the salt works to hunt – many tule areas. Noted many dykes & little place to hunt except a patch of weeds & a patch of tules.

Bay Farm Island Alameda Co. (Howell)

salt marsh – in tall Salicornia

These b&s apparently coll 1916 Jan 20, Mar 13

Laye Miller

10333 Louisiana Av LA

C Restview 1-3004

Marshall, 1947

Melospiza

July 9 Dickey Coll.

sanillula Howell's notes

Palo Alto Sept 30 - Oct 1 1916 Camped 1 mi E of town & ½ mi from extensive bay marshes. Got the SS in the marsh in Tules. incl 1 which he calls "santaecrucis" which may have #6528 been taken in "willows in a little depression near the house." Some of the others may have been from willows too.

santaecrucis

Palo Alto Howells notes #6528

Portola, San Mateo Co " " Sept 26, 1915 probably should be 1916 with rest from Palo Alto. Fresh-water stream in canyon - (not near salt marsh)

Portola Huey's notes Nov 24-25 1917 Canyon when camped same as Huey & Howell in 1916. Up canyon is sm. reservoir with Tules where got all the Song Sparrows:

E 625 E 642-645 E 653

Samuels Huey's Notes Oct 18, 19, 1917

Petaluma camped about 2½ mi South of town near the salt marsh. Coll in salt marsh "do not perch on top of rushes but hop along the mud"

E 467 - E476; E479 - 485.4

Marshall 1947

July 9 Melospiza Dickey Collection

Melospiza melodia from "South Suisun Bay" Grinnell says race with coloration ♂ mapillaris and with size & structure ♂ gouldi or intergrades.

"South Suisun Bay, Calif." (Howell)
& "South Suisun Bay, Contra Costa Co., Calif" (Huey)

September 22-24 1916

Huey: "found fair quarters near Associated Oil Company's plant on the south side of Suisun Bay." "went after song sparrows which were thick." D 530 - D 564

"
-- Broke Camp.
We had been camping in an old cow shed in pasture. The trapping & shooting had all been done near a tule marsh of about two acres & about 300 yards from camp. I have never seen birds so thick as were the song sparrows in this limited area.
We spent the night above Walnut Creek setting out a line of traps each."

Howell: Sept 21, 1916 "Huey & I left Berkeley in Dickey's Ford about 2 PM,

Marshall, 1947

July 9 Dickey Collections

Melospiza

& ran over the Walnut Creek road through Concord & within ~~half~~ a mile of Port Costa, Contra Costa Co, on the marshes of South Suisun Bay. Here we camped in a shed used as a shelter for horses, on the edge of the willow ~~thicket~~ bordering a small creek. Within ~~600~~ 500' is a tule marsh covering about six acres, & bordered by dense weeds. — in tules -- more song sparrows than I have ever seen in one place before.

Sept 22 -- Started out at 7:15 & back at 8:30 with 15 song sparrows. These feed in the tall weeds & when disturbed, seek the nearby tules. 55 - 6486 - 6511."

"a barn owl came out of the willows before sundown & was hunting about among the weeds at a great rate.

Sept 24 - We broke camp at 2 PM, going back thru Concord & up Walnut Creek, where we made a light camp. "

Note: On catalogue file - Dickey has "2 mi NW Concord". Van Rossem says Huey showed Dickey the place on the topo sheet.

Marshall, 1947

Melospiza melodia

July 11 Oceanside San Diego Co. Calif.

Here only saw one was molting. In the actual Bay the habitat is mostly very tall Typha & Scirpus "microcarpus" = calif.? with song sparrows occasional. Squeaked up about 6 in various places & they seemed very rare. It was midday hot, ss molting perhaps at this season they are just not in evidence & are silent & really are more numerous than appears. The habitat looked OK for them altho water was retreating & great tracts of Typha were drying up. At head of bay was patch of tall Salicornia & Scirpus campestris on dry gnd. No Song Sparrows - - - - Some Willows on banks. Juncus inland from the Scirpus ocurred in mats 1' high.

Thru seemed to be song sparrows around but not responding. Saw no Savannahs. Did see Yellowthroats.

On 1st river mouth NW Oceanside a highway bridge goes over the boundary between Willows, Fennelum, Chenopodium, etc & fresh-H2O habitat, & Pure

Melospiza melodia

July 11 Oceanside San Diego Co. Calif.
Salicornia - Juncea - Baccharis plummeral
salt habitat. A flat of
several acres had tall Salicornia
up to 2' heavily crowded with
the slender yellow parasite Dichelostemma
Juncea, Frankenia. I doubt if
a song sparrow could forage in
this dense mat. None were found.
Had evidence for 2 in an
adjacent pond with Scirpus "nuts" &
Persoon oak - saw them a couple times
& heard alarm note when I
tossed in a rock. This about
3 PM hot. - shows how little
response from S.S at this season when know they
are present. Could have been
many more around willows &
Baccharis. However, like the
other bay, it seems to me
that if they were at all
numerous even now during the
moult I should see droves of
juves in the weeds & everywhere
around edges of these bays, esp
where tall Scirpus & typha so
common.

Melospiza melodia

Aug 16 Avon, Contra Costa Co., Calif.
Visited area N-E Avon (1-2 mi)
on west side of Hastings
Creek. I wanted to look at
this marsh between hiway
& bay shore because it
looked like natural veg. Actually
it turned out all to be drained,
banks having been built along
the W bank of Hastings Creek
& along the shore of Suisun Bay.
∴ the ground was rather dry
(except for some standing water)
& had no tidal sloughs at
all. It's growth was everything
I have ever seen in marsh
+ many new weeds, but the
general growth was either on
too dry ground or too shallow
for song Sparrows. Prominent
plants on this "tundra-like"
area: Salicornia Bergodium,
Jaumea, Distichlis, Limonium,
Juncus. No Grindelia or any
char. Salicornia - Grindelia habitat.
Natural areas that I could see
on islands, on E side Hastings
creek, & on S side hiway, all

Marshall, 1947

Melospiza melodia

Aug 6 Avon, Contra Costa Co., Calif.
had the regular natural Suisun Bay habitat of Scirpus acutus, olneyi & campestris, with some small typha too.

All the song sparrows were restricted to within 20 yds (often less) of the water in the natural habitat of the slough - bank - namely the Scirpus & typha as stated. Some occasionally went into the Baccharis growing on the raised, dry artificial bank a few yards in from the water, but most were confined to clumps of tall S. acutus & often I could find none in areas where only the smaller Scirpi prevailed.

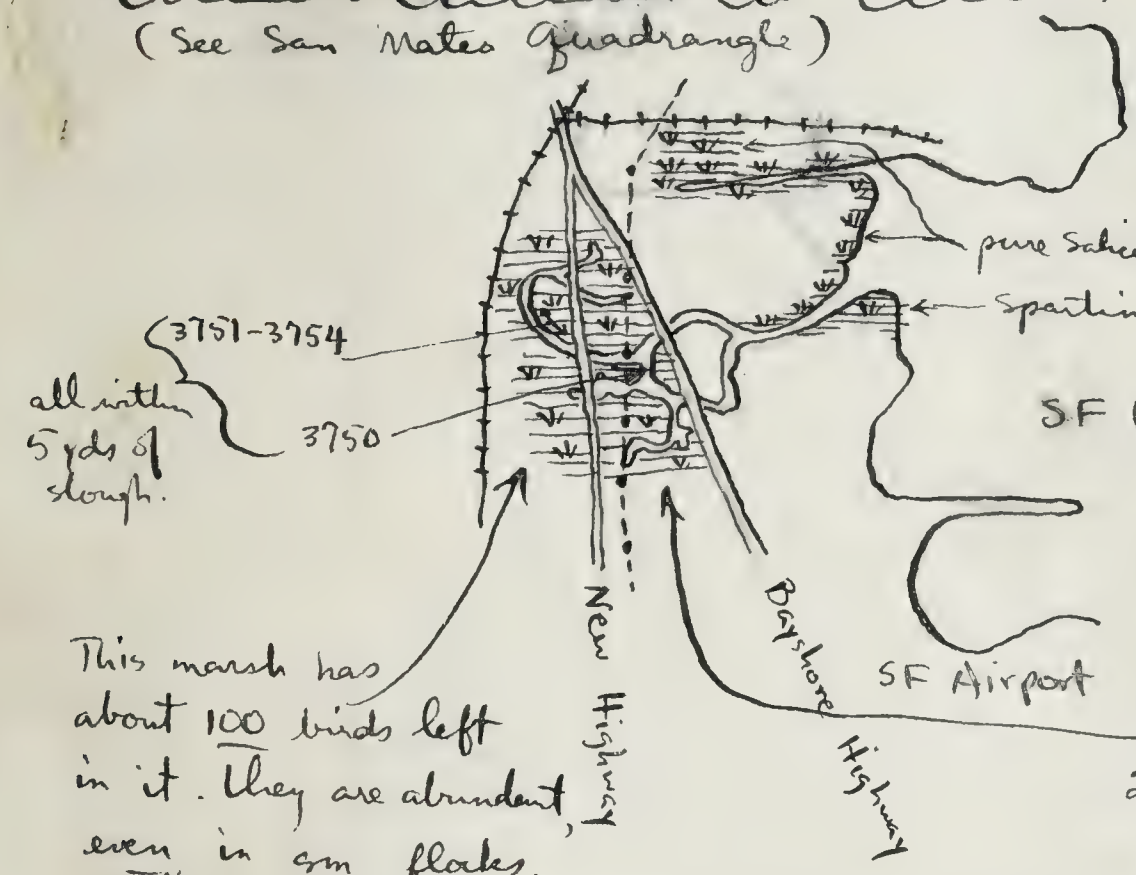
SS. very quiet, seldom seen or heard. I heard one group all giving alarm notes & one sang twice - this about noon. So many came around (about 5 or 6) in this one spot that I figure they are pretty common but not not in evidence now during the molt. No indic. of any wandering away from reg. habitat

Marshall, 1947

Melospiza

Collections Sept – Oct 1947

Salt Marsh 1 3/4 mi WSW Pt. San Bruno, San Mateo Co., Calif.
(See San Mateo quadrangle)



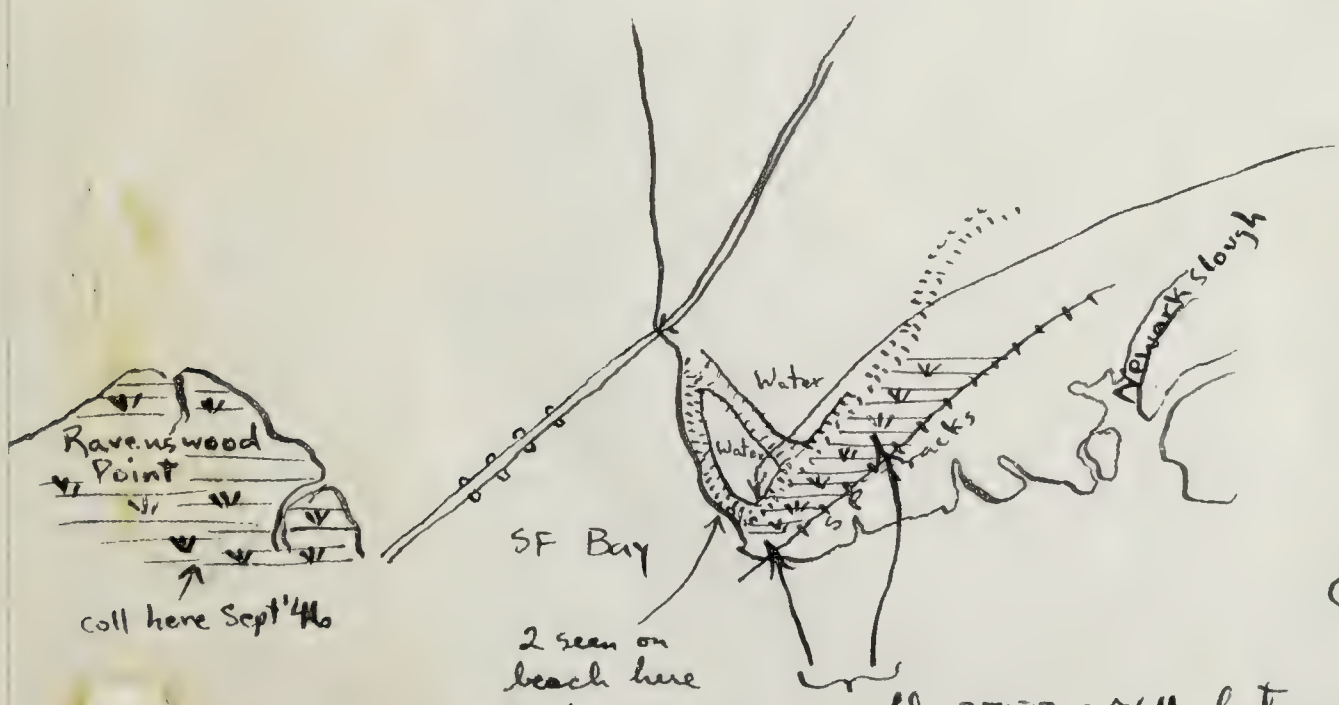
no song sparrows only Savannahs many rats, garbage, sewage. Habitat limited to very narrow fringe.

This marsh has about 100 birds left in it. They are abundant, even in rain flakes. Stick pretty close to banks of sloughs. Habitat is Salicornia 1 or more with grindelia scattered along edges of sloughs. On western edge, is higher, drier, & with more Chenopodium – more Savannahs there.

More numerous here between the 2 highways, where better salt habitat. Still a perfectly natural tidal Salicornia-grindelia marsh.

A remarkably isolated population about to become extinct.

Salt marsh 5/8 mi S Dumbarton Bridge, Alameda Co. Calif.
(See Hayward quadrangle)



2 seen on beach here 50 yds away from vegetation foraging in piles drift wood.

a pair watched on edge of pond here for a long time. They would not go back to Salicornia – hopped along in sand & mud & under driftwood. Neither could I make them fly out over the water. They hop very rapidly when in open & carry tail at high angle. Come up close & peek at you from under boards. This pair worked about 50 yds along shore.

coll 3755-3764 between these 2 pts in typical natural Salicornia-grindelia marsh with grindelia along the many little winding sloughs. Bds. very numerous Saw about 20 in 1/2 mile.

Marshall 1947 — Melospiza — 128.

Alviso, Santa Clara Co., Calif.

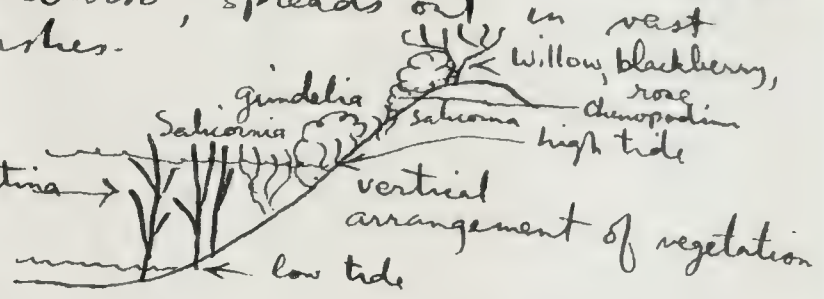
September 16, 21, Specimens collected. For orientation see map under May 12 + 14 '47

Collections Sept-Oct 1947

6 localities along Alviso Slough & Guadalupe R. Santa Clara Co. Calif. (See Catalog)
(See Palo Alto & San Jose Quadrangles)

This represents a continuous population for 9 miles. From the 1st willows upstream, is only single column of pairs. N of Alviso, spreads out in vast marshes.

Bay shore, mouth Alviso Slough
3737-3746 Very abundant but only in grindelia along little natural sloughs. Spartina grows in the sloughs. Salicornia on flats between them but is very low & with Jaumea, Frankenia, looks like marshes in LA Co. very low & not in clumps. Looks like it is overrun by tides.



SP RR.

Alviso Slough

Alviso Slough, Santa Clara Co.
3679-3690 Pure Natural Salicornia-grindelia-Spartina. Savannah Sparrows too. Birds rather widely spaced. about 24 in area shown.

I rowed all along this slough from alviso to the bay & found continuous growth of tall Spartina all the way with contin population of sparrows. At arrow, saw one fly across the slough.

pure Spartina

Vast expanses of Spartina

Salt Beds

Alviso

last pure salt habitat (Salicornia grindelia) & first willows.

habitat somewhat mixed until here where heavy Willow, blackberry growth continues. Still tidal past here though.

pure Salicornia-grindelia with wide Spartina areas on lower ground. All coll. within couple yds of River
Guadalupe R. salt marsh ½ mi SE Alviso
3625-3634

mixed habitat-Salicornia & grindelia low on banks, Salix common higher
Only about 12 bds noted along here. All coll within 5 yds of streamside.
Guadalupe R. 7/8 mi SE Alviso
3615-3624

Guadalupe River

Guadalupe R., 1½ mi SE Alviso
3635-3642
3691-3692
Stream tidal here and limited by artificial banks, but veg. is all pure fresh-water: mostly low willows & blackberry. Single column of pairs. Only about 15-20 bds in this 900 yds.

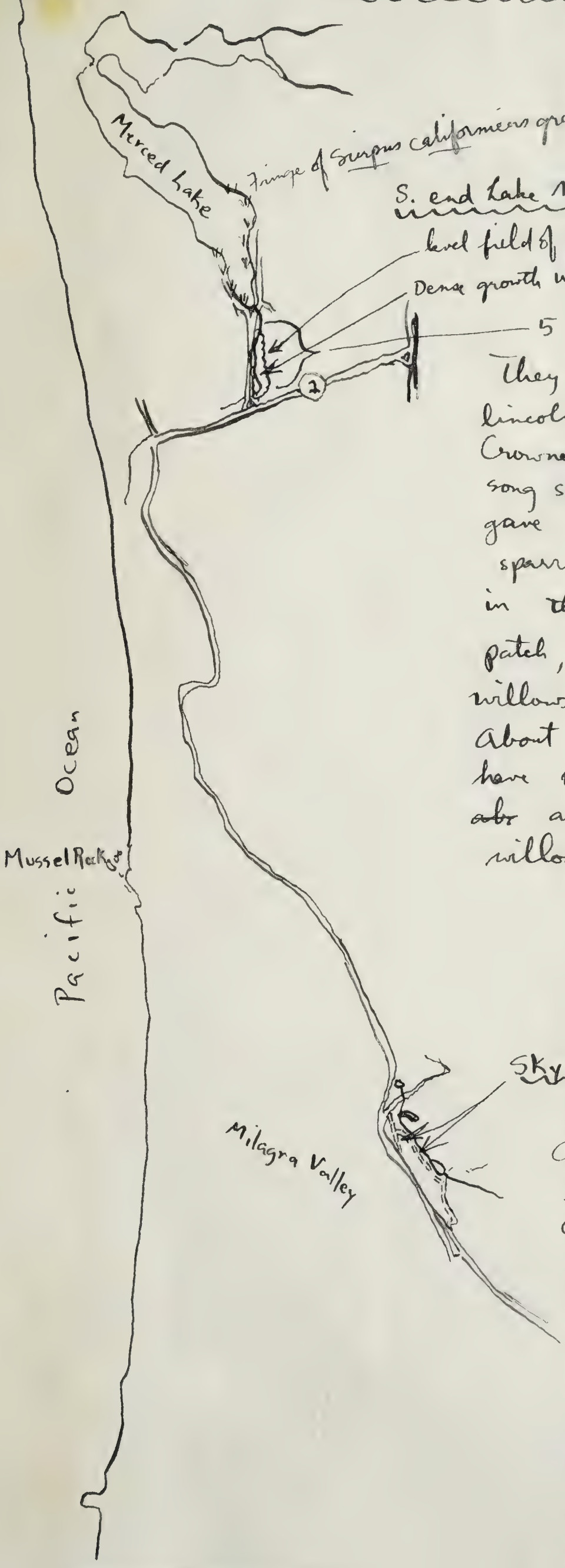
Guadalupe R. 4½ mi SE Alviso Santa Clara Co.
3693-3702

Probably 15-20 bds. Took 10 bds in 5/40 ~~two miles~~ 600 yds. Can be no more than single line of pairs. High artificial banks narrow the habitat but is good growth open willows, Typha, blackberry, Box Elder, Alders, Rose.

standing fresh water.

Collections Sept–Oct '47

(See San Mateo Quadrangle)



S. end Lake Merced, San Mateo Co., Calif.

level field of grass, Conium, dock

Dense growth willows 25' with understory of Blackberry

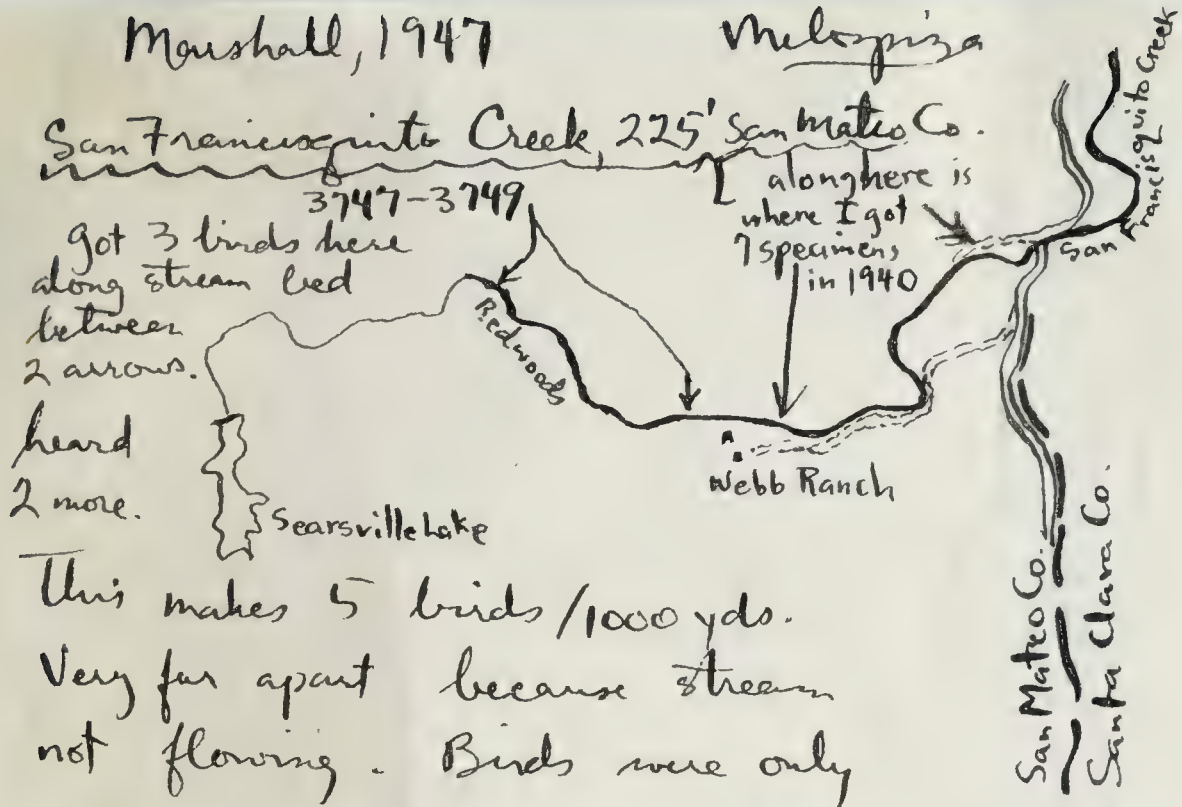
5 birds coll. here 3807–3811

They were in loose flocks with lincoln sparrows (10±), Fox Sparrows (8±), Crowned Sparrows (dozens), fusherella song sparrows (saw at least 2, they gave peculiar "chuck" call v fox sparrow) These flocks were out in the field 50 yds from willow patch, but would return to willows occasionally en masse. About a dozen santaecrucis must have been in this area. Birds abv avoided interior of dense willow patch.

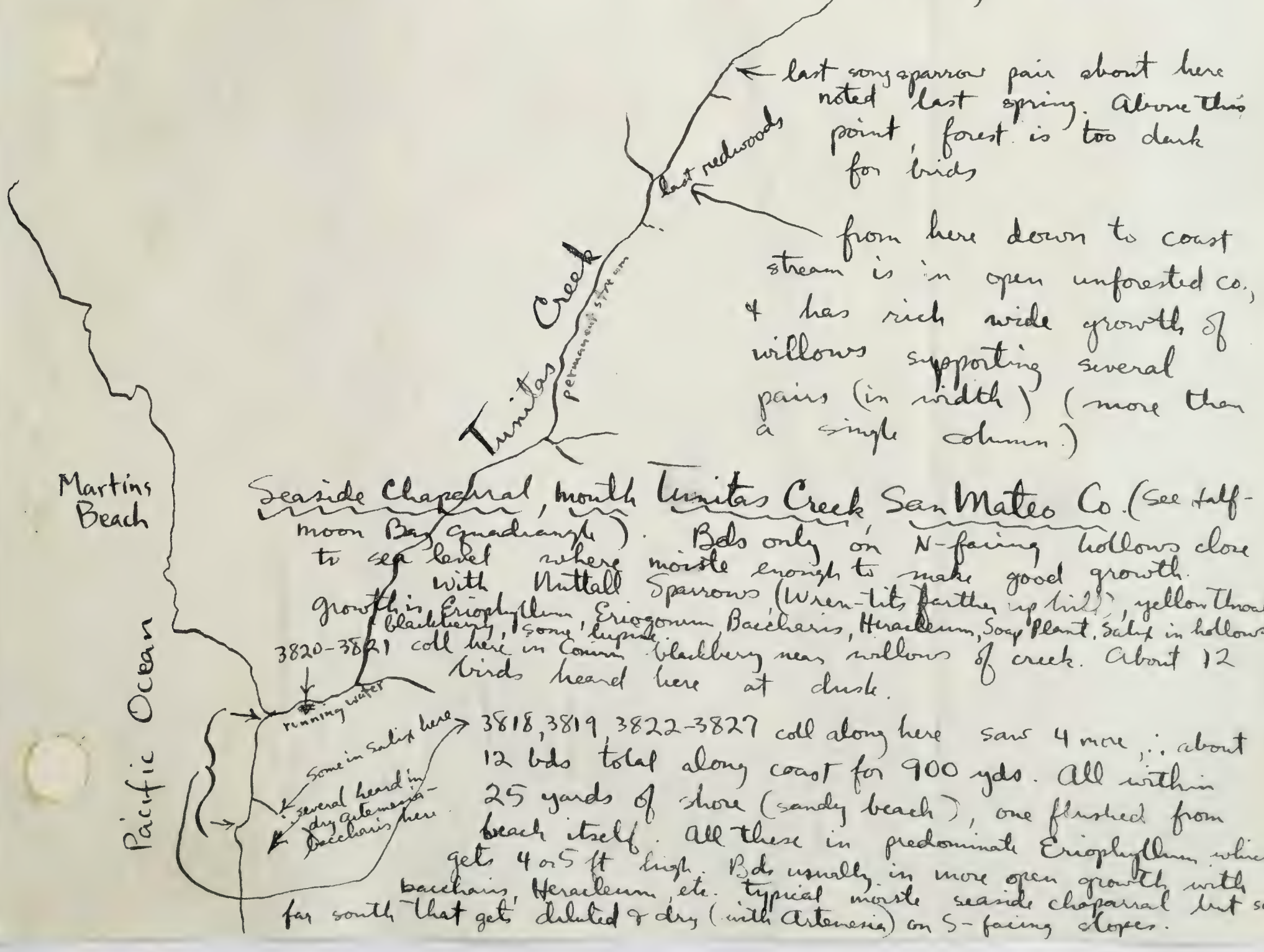
Skyline Hiway E Mussel Rock, San Mateo Co.

A rather natural habitat of low dense baccharis, juncus, Conium Heracleum & many smaller spingy plants quite like seaside chaparral. Birds very abundant – with crowned & lincoln sparrows, and away from water. Saw about 12 birds in 100 yds. Seems a very moiste habitat. Was a little patch of typha there also.

(See Palo Alto Quadrangle)


San Francisquito Creek, 225' San Mateo Co.
3747-3749
Got 3 birds here along stream bed between 2 arrows.
heard 2 more.
Searsville Lake
Redwoods
along here is where I got 7 specimens in 1940
San Francisquito Creek
Webb Ranch
San Mateo Co.
Santa Clara Co.

This makes 5 birds/1000 yds. Very far apart because stream not flowing. Birds were only at 3 places where there were persistant pools. Here they foraged under blackberry or Symphoricarpos albus in rank growth also one sm patch Typha. Occasional low willows, mostly large oaks & laurels, Maples alders. Stream is about limit of tolerance both for shade & for dryness. Redwoods grow on NE facing hill as shown

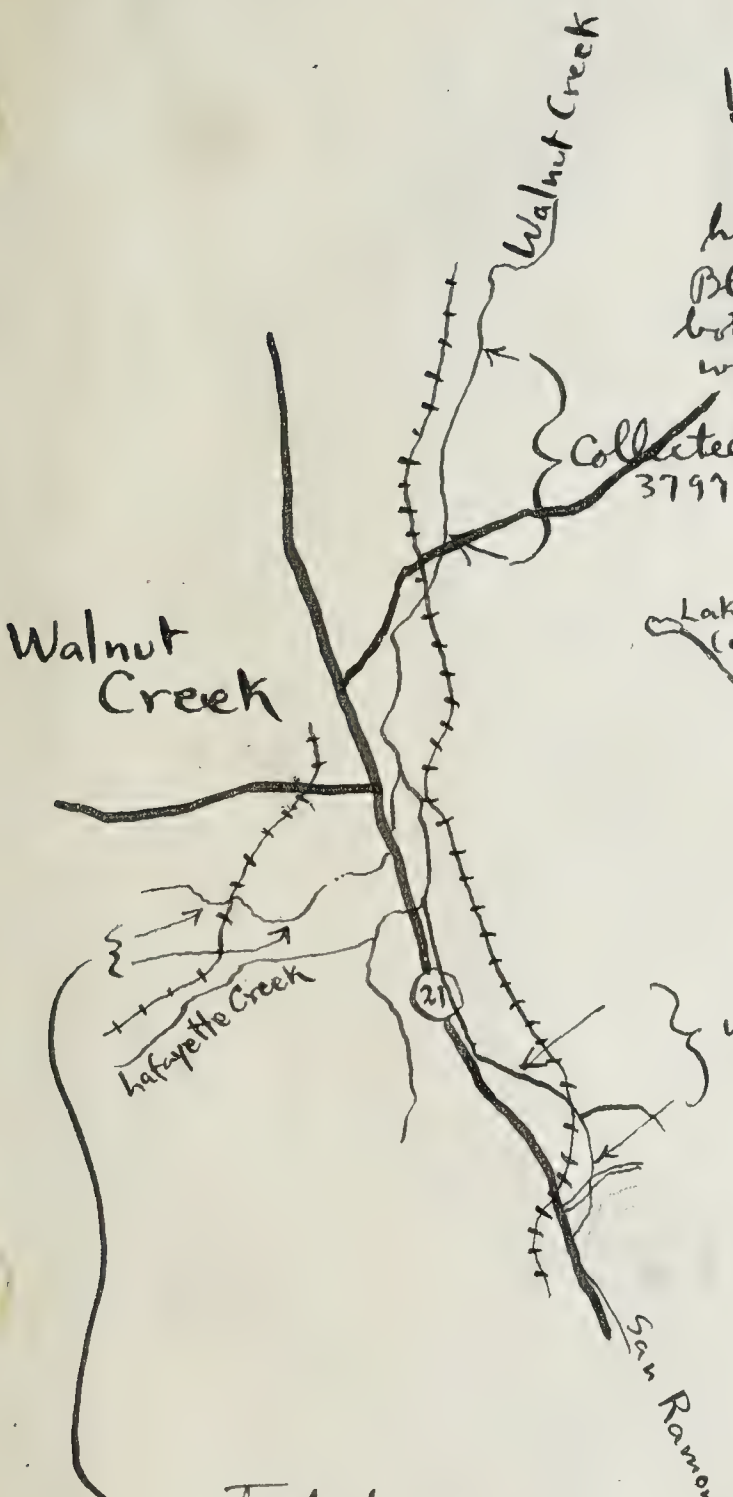

last song sparrow pair about here noted last spring. Above this point, forest is too dark for birds
last redwoods
from here down to coast stream is in open unforested co., & has rich wide growth of willows supporting several pairs (in width) (more than a single column)
Tunitas Creek
Permanent surface stream
Martins Beach
Pacific Ocean
3820-3821 call here in Comm. blackberry near willows of creek. About 12 birds heard here at dusk.
running water
Some in salt here
several heard in dry artemesia-baccharis here
3818, 3819, 3822-3827 call along here saw 4 more ∴ about 12 bds total along coast for 900 yds. All within 25 yards of shore (sandy beach), one flushed from beach itself. All these in predominate Eriophyllum which gets 4 or 5 ft high. Bds usually in more open growth with baccharis, Heracleum, etc. typical inside seaside chaparral but so far south that get diluted & dry (with Artemesia) on S-facing slopes.

Seaside Chaparral, mouth Tunitas Creek San Mateo Co. (See Half-moon Bay Quadrangle). Bds only on N-facing hollows close to sea level where moist enough to make good growth. With Nuttall Sparrows (Wren-tits farther up hill), yellow throats, blackberry, song, lupine, Eriogonum Baccharis, Heracleum, Soap Plant, Salix in hollows.

(See Concord quadrangle)

Walnut Creek, 3 mi due E Lafayette Ridge Contra Costa Co. Calif. - Has constraining high artificial banks with growth Elder, Willow, Blackberry, Box Elder, Rose. Some typha, grass in bottom. There is running water, very foul. Birds widely spaced, usually 2 or 3 together. Some Laurel & Oak, but plenty open.

Collected 7 birds along 1100 yds here. Saw about 4 more.
3797-3803



walked about a mile along creek here. Is dry. No birds. Plenty Salix, open type. Dry typha patches.

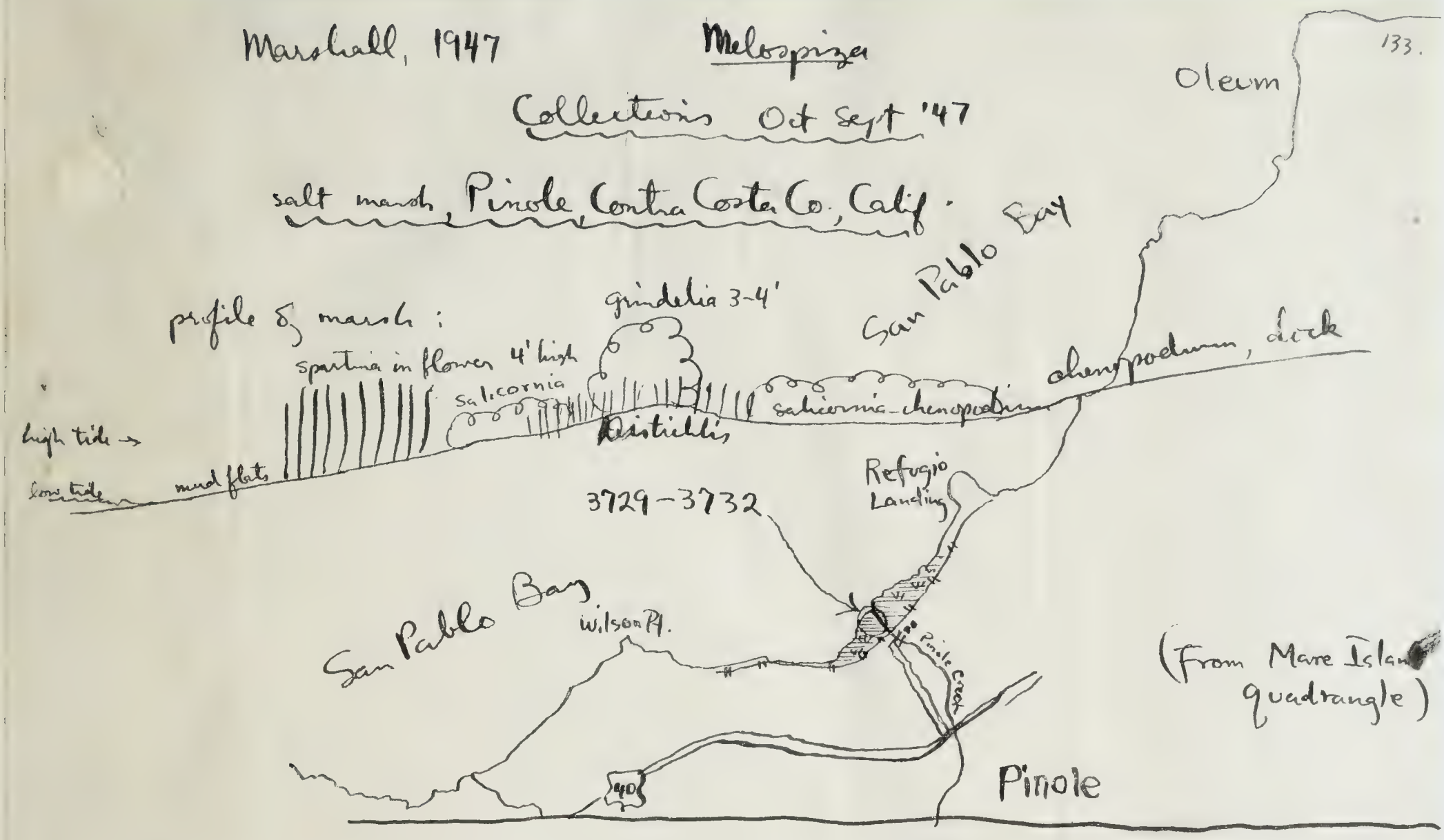
Tributary of Walnut Creek (at RR bridge) 3 3/4 mi due N Las Trampas Peak Contra Costa Co.

Coll. 3 birds here (saw 1 more). An open stream, no laurel or oak. Mostly low Salix + patches Typha just right for song sparrows. Has running water in it which is let out of Lafayette Reservoir. Birds scarce - must dry up sometimes.

Marshall, 1947 **Melospiza**

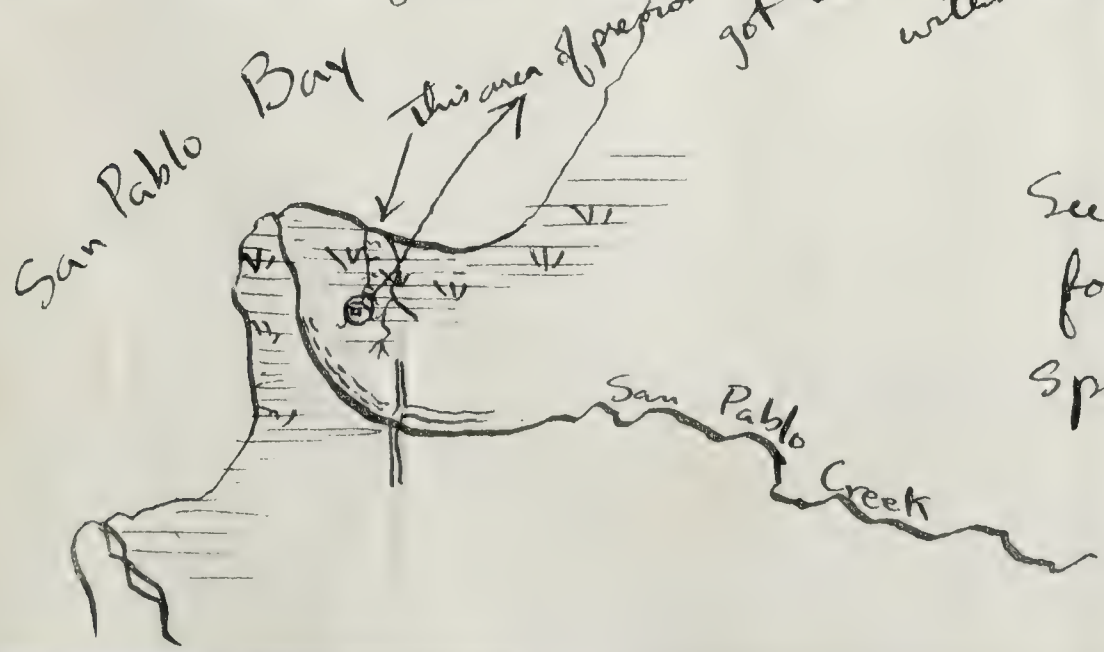
Collections Oct Sept '47

salt marsh, Pinole, Contra Costa Co., Calif.



Was on the marsh here before daylight & got some sparrows before they had fed. Stom. empty. No ticks. One was "flycatching" from a stake. I shot it & found ad. mosquito in its mouth, another in stom. Bds. numerous here I saw or heard about 10 in little area shown. Watched them foraging on mud flats getting several yards away from cover of Spartina.

salt marsh, San Pablo, Contra Costa Co. Calif. (See San Francisco Quadrangle)


San Pablo Bay
this area of previous ecological work is where I got the 4 specimens 3733-3736 within circle
San Pablo Creek

See next page for detail.

Spartina is in flower (Oct 1)

Marshall, 1947

Melospiza

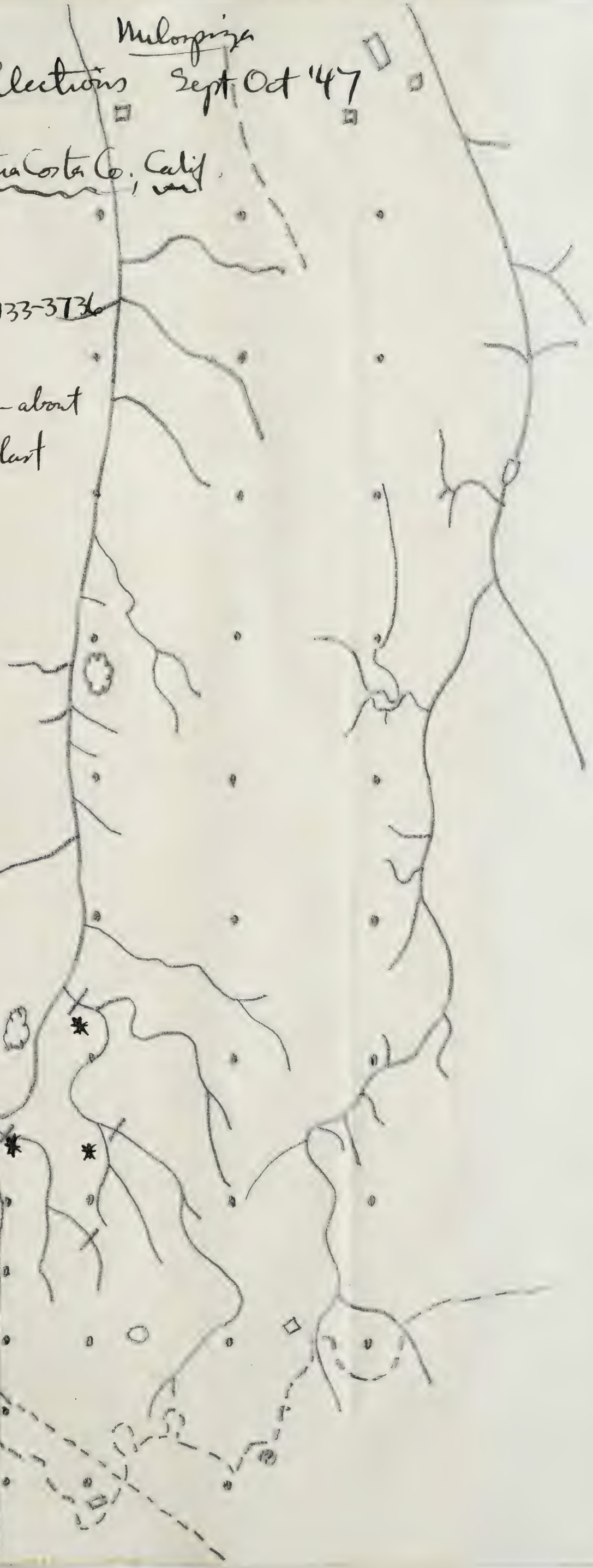
Collections Sept Oct '47

N

Galt mark San Pablo Contra Costa Co. Calif.

* = Specimens 3733-3736

Many birds seen - about same nos. as last spring

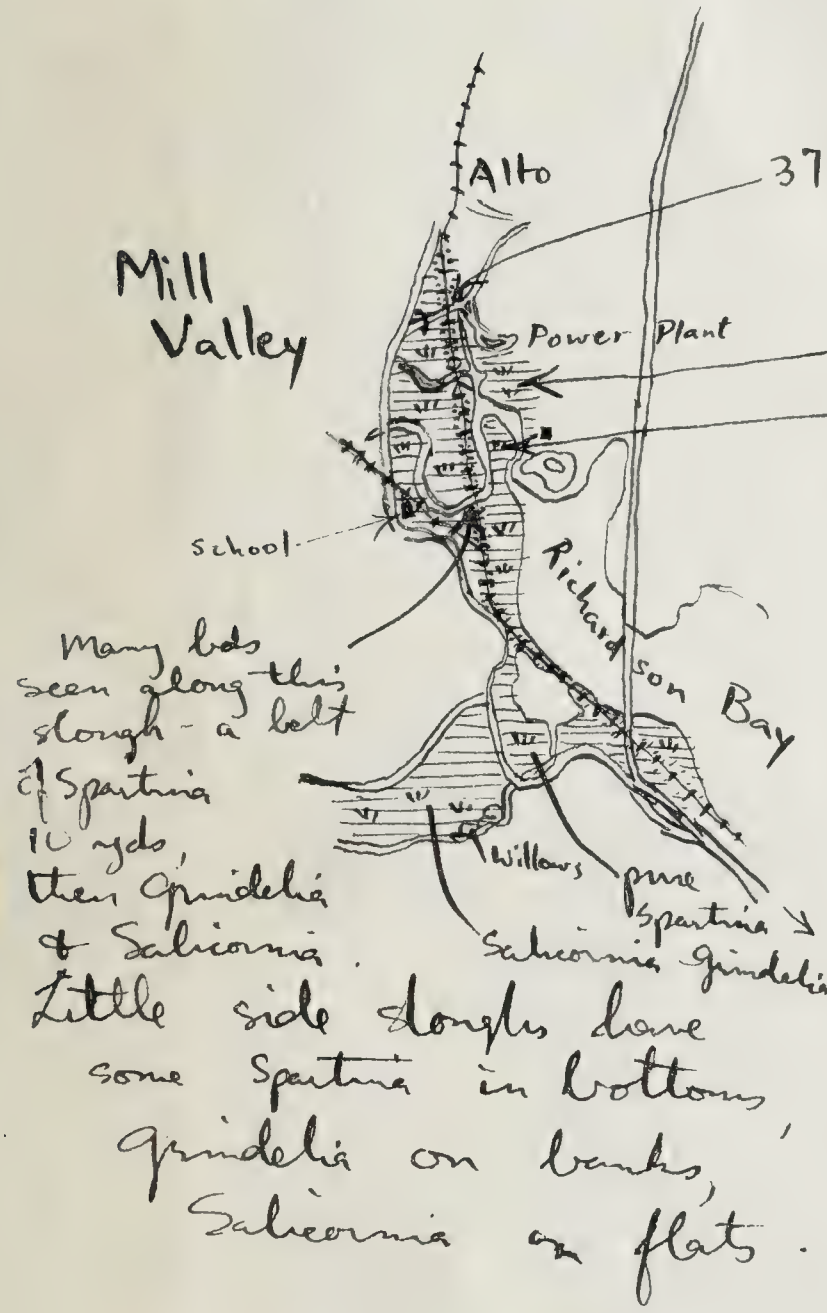


Marshall, 1947 Melospiza

Collections Sept Oct '47

Richardson Bay, Marin Co. Calif.

(See Tamalpais quadrangle)



3780 here bds were going back & forth from Salicornia-Spartina along the slough to poison oak & Foeniculum 10 yds away.

3781 Salicornia few bds. here Salicornia low & dry.

3782-3783 Pure Spartina in area where grd covered at high-hde. Several pairs here in area of Spartina 50 yds wide.

Many bds seen along this slough - a belt of Spartina 10 yds, then Grindelia & Salicornia. Little side sloughs have some Spartina in bottoms, grindelia on banks, Salicornia on flats.

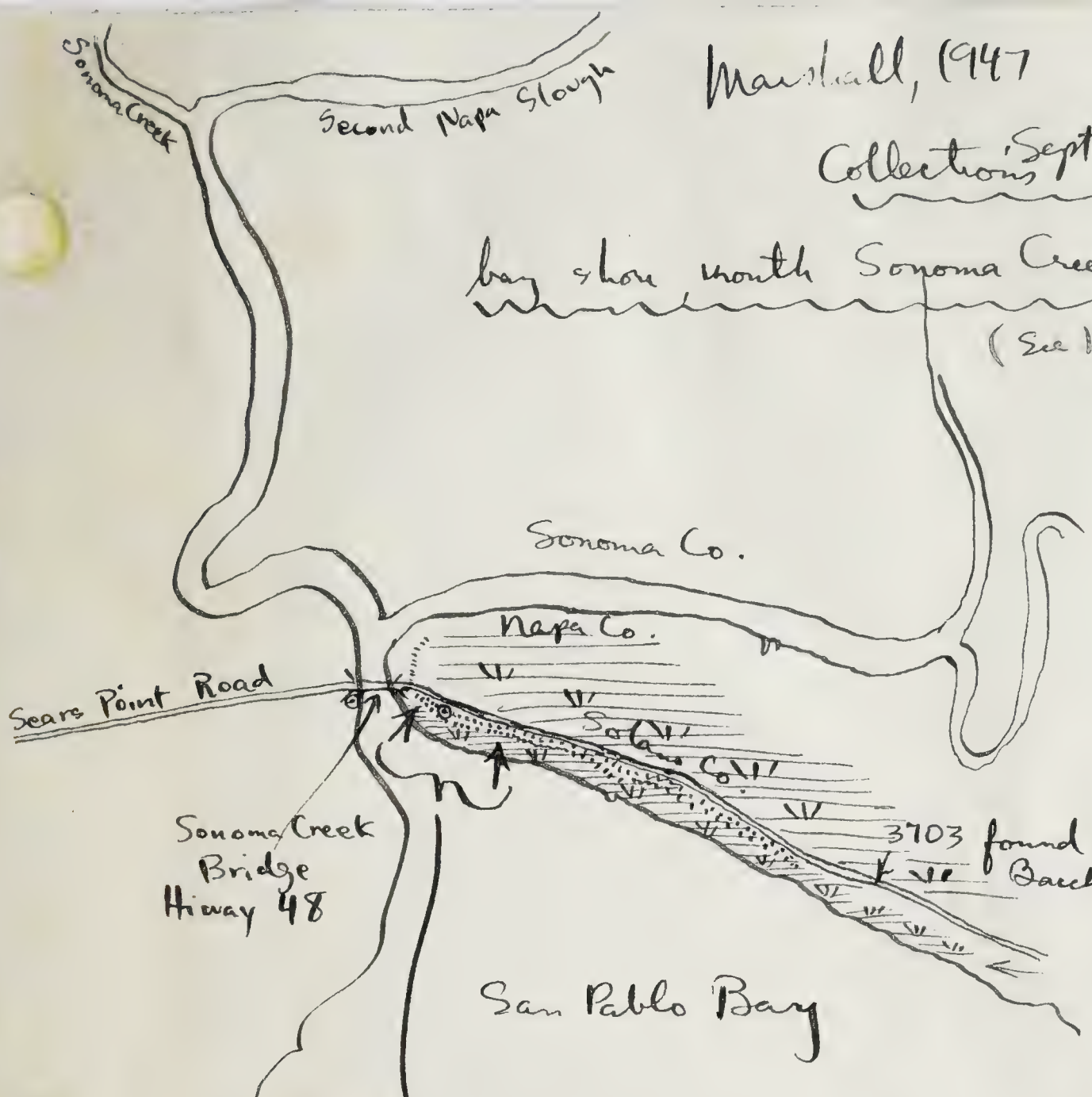
Good pure salt habitat, yet on edges, birds go into brush piles, poison oak, willow, Conium, etc. The birds on edges seem to be milling around in groups (maybe they don't breed here). Those out in pure salt marsh stationary.

Marshall, 1947 Melospiza

Collections Sept Oct 1947

bay shore mouth Sonoma Creek, Solano Co., Calif.

(See Mare Isl. Quadrangle)



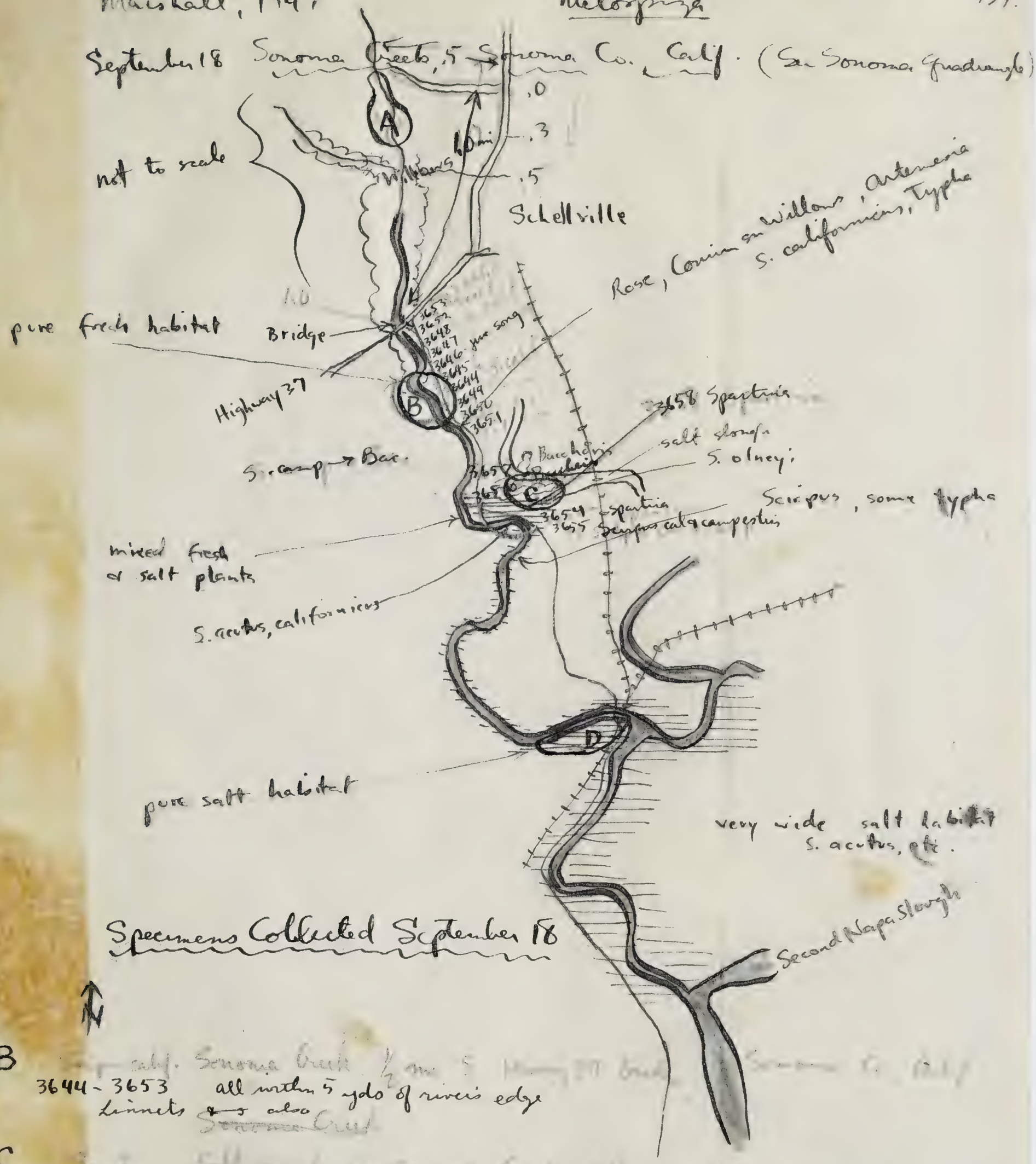
3703 found dead in road here
Baccharis is prevailing veg.

pure Salicornia except for fringe Spartina next to shore.

→ 3704–3712 collected here in pure salt marsh between Baccharis-covered bank and the bay shore. The Spartina at the shore has most birds — was tall - 5' ± & thde. also was in flower & bds. eating seeds. covered with salt crystals as if submerged every high Spartina here forms a belt over wettest ground from mud flats at shore, in about 50 yds. Then patches of Salicornia (higher) alternating with patches of Scirpus campestris (lower).

Birds watched foraging on mud flats, ~~are~~ get a couple yards away from Spartina cover ~~at~~ frequently. Bds. very abundant here. About 15 seen or heard in this little distance. No savannah sparrows here - growth all rather tall.

September 18 Sonoma Creek, 5 → Sonoma Co., Calif. (San Sonoma Quadrangle)



Specimens Collected September 18

N

B

3644 - 3653 all within 5 yds of river's edge
Linnets & ~~s~~ also

C

3654 - 3658 all within 10 yds of slough
many Yellowthroats, marsh wrens.

D

3659 - 3668 all within area 40 - 15 yds wide of S. campestris on S. bank.
yellow-throats, marsh wrens

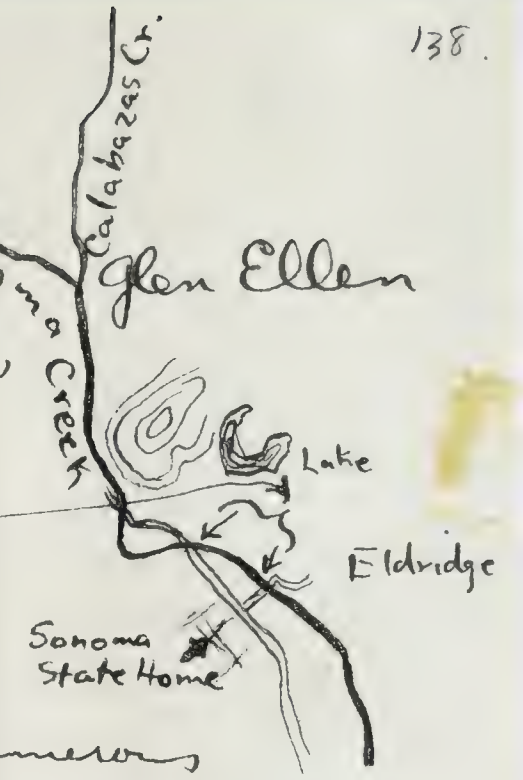
A

3669 - 3678 all within 25 yds of river bank.
No running water. tall trees, some canal, etc. Bds very scarce. Many big pools. Saw 3 bds in .3 mi. Then came to a wide place about 100 yds x 50 yds. which was very open, & had low young Salix & 6' high Polygonum acre & some typha. Much clear water in stream bed. Were at least 20 birds here, also some Lincolns. Was constant activity calling some singing even tho windy.

Marshall, 1947 Meloospiza

Collections Sept & Oct '47

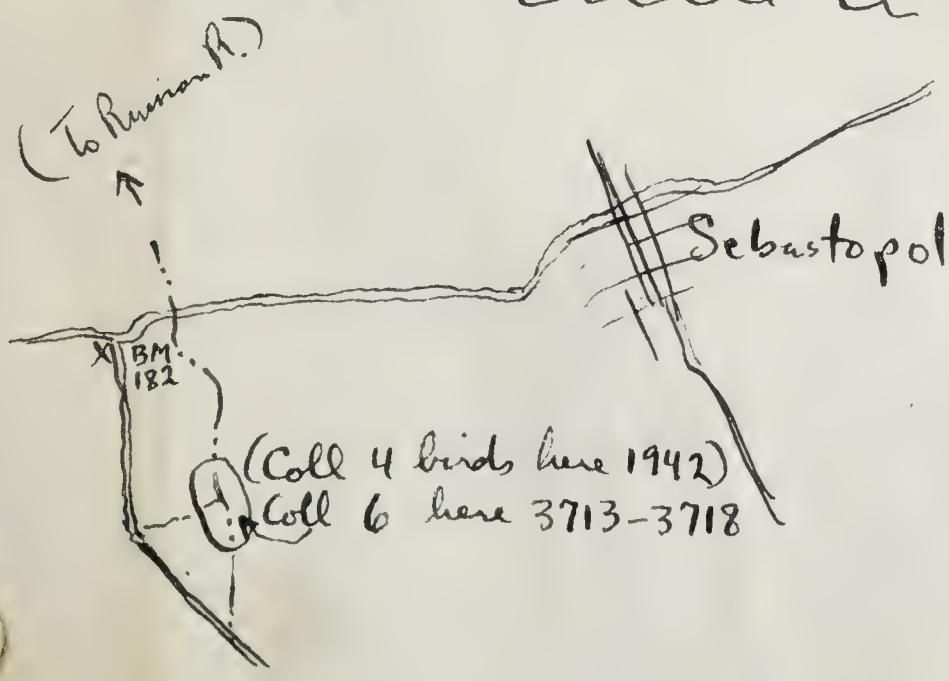
Sonoma Creek, 1 mi S Glen Ellen Sonoma Co., Calif. (See Santa Rosa quadrangle)



Open ranks of low willows in patches with bare or rocky ground between. Coll. 10 bds. here between the 2 arrows all along on. close to water. 3719–3728

Habitat wide — no man-made banks. Could be at least 2 ranks of pairs along here. Willows, incl. grey kind, the predom veg. Also is alder, Polygonum, blackberry. About 12 birds in 400 yards. The stream is wide here & has permanent running water. I don't believe it is as free from tall trees (laurels maples) above & below this point. Here the growth is low & open & broken; ideal for song sparrows.

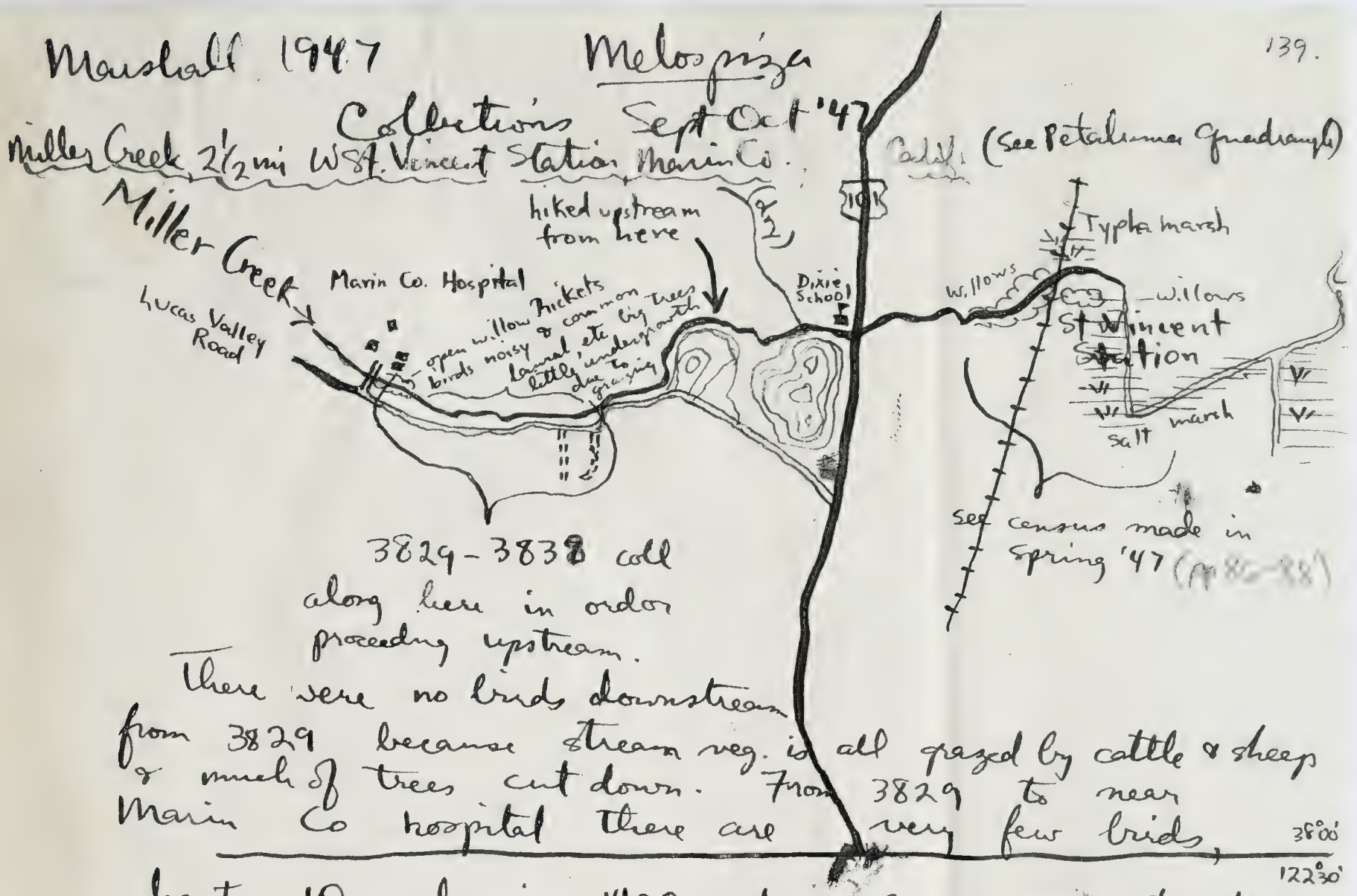
Sebastopol, Sonoma Co., Calif.



The stream runs thru a flat valley here of pasture. Stream has low dense salix, blackberry, jimmies. Birds abundant.

Collections Sept Oct '47

Miller Creek 2½ mi W St. Vincent Station, Marin Co. Calif. (See Petaluma Quadrangle)



There were no birds downstream from 3829 because stream veg. is all grazed by cattle & sheep & much of trees cut down. From 3829 to near Marin Co hospital there are very few birds, about 10 only in 1400 yards. 2 causes - too dense overstory of tall trees, laurel & oak; blackberry, Polygonum brush limited to little patches by grazing; 100 yds apart or so. Usually find a bird where a little brush however. Was one little patch of Typha, nettles, etc with 3 birds.

Bds. amazingly shy along here - windy - (none called except once or twice for a couple) - coll only by seeing them: a) standing perfectly still under blackberry thicket (saw the spotted chest); b) moving among roots of laurel on stream bank (like Canyon Wren); c) flushed from little patches Polygonum. Stream has water - probably permanent. Probably no birds downstream until St. Vincents School. Upstream are plenty in open willow growth at Hospital & looks like OK habitat upstream from there. Stream dries up below here & has no brush at all.

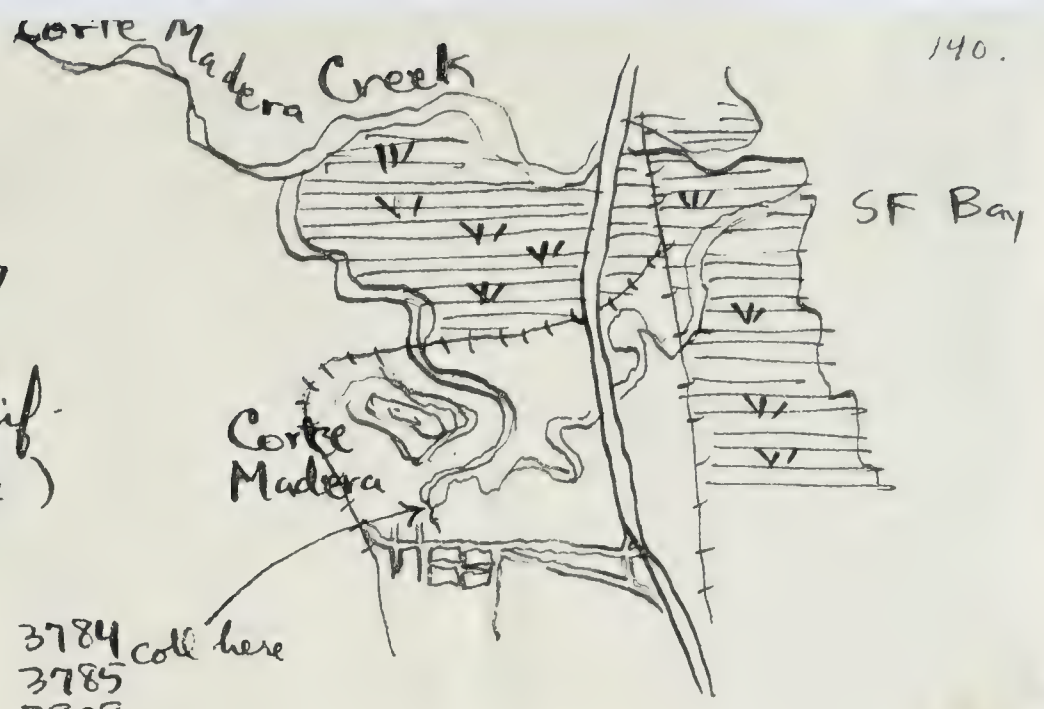
Marshall, 1947

Melospiza

Collections Sept Oct '47

Corte Madera, Marin Co. Calif.

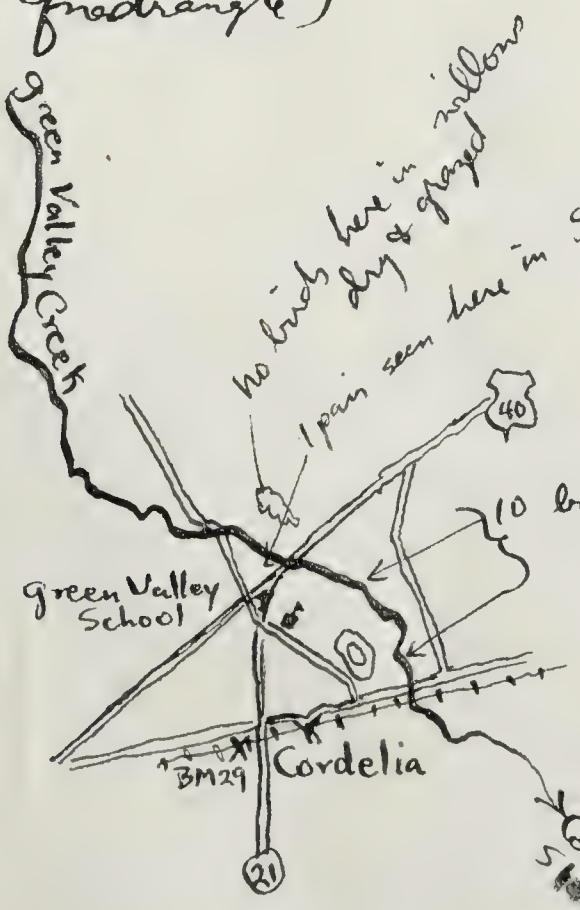
(See Tamalpais Quadrangle)



These specimens were supposed to represent fresh-water habitat and were taken in patch of pure typha & patch of blackberry 2 yds from it — 8 or 10 bds in vicinity - Actually, however, the typha is growing in the head of a slough which connects with the salt marsh, and 50 yards from here you get sparrows in Distichlis & little patches of Scirpus campestris along the same slough. So it looks like another spot where is continuity between the 2 habitats.

Green Valley Creek, Cordelia, Solano Co. Calif.

(see Carquinez Quadrangle)



10 birds coll here along dry creek bed in willows (low thickets) and blackberry, rose, etc. No tall trees. Open growth. No birds upstream from this point.

3786 – 3790, 3813-3817

No more than 12 birds in this 600 yards. Same nos. as spring but now none up or downstream from here.

Melospiza

Oct 18 Green Valley Creek, Cordelia & Vicinity, Solano Co. Calif.
Upstream from the last specimen coll. at arrow on map, preceding page, there were no more birds except the pair at the cesspool at highway where a little standing pool water. Went with Stoner 4½ mi upstream from Cordelia to the Green Valley public picnic ground. Creek has been dry all the way for several months - has water now from rain only couple days ago. Still no birds in the picnic area & boy scout camp where I have coll. summer birds previously and where Stoner has found 6 pairs & collected eggs. Stream dries up every year, ∴ birds must move out in late summer to return when, if at all? Unlikely that must be recolonized every spring. Same birds must return.
This is Green Valley, 4 3/4 mi NNW BM 29, Cordelia, Solano Co.
N1 (May 1937)
Saw good song sparrow habitat in this area - low open willow patches, blackberry, Polygonum patches etc. Coll. a Chestnut-backed Chickadee from a flock in willows, also 2 Creepers from tall straight-trunked oaks. Saw Steller Jays, Hairy Woodpeckers (also Downy & Nuttall), Juncos, Siskins, etc.

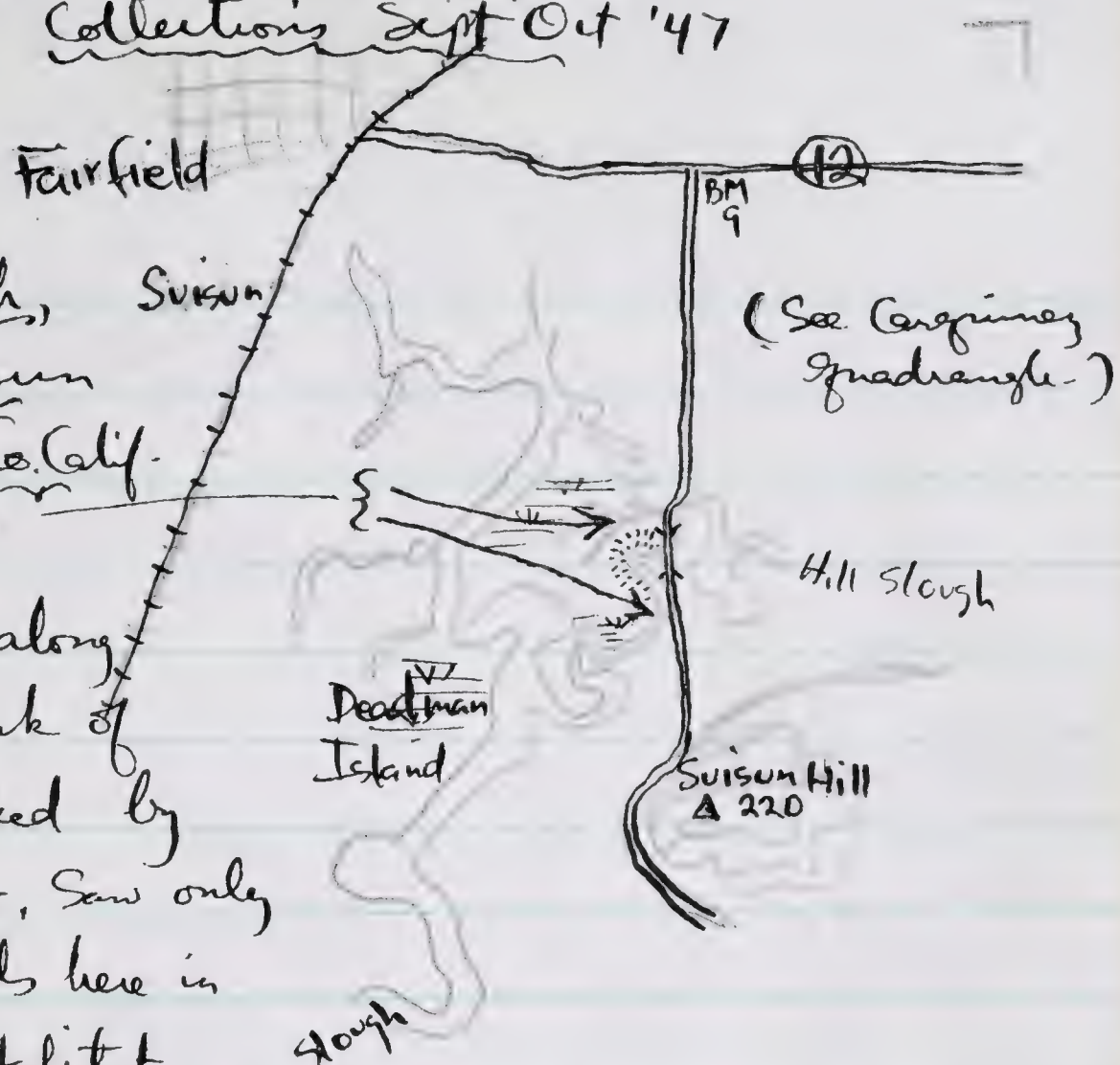
etc

Melospiza

Napa Co }
Oct 18 Suisun Creek, Solano Co. } Calif.

Stopped several places along creek in good habitat but no water. Open willow thickets, recently dried up Typha, Rose, blackberry etc. No birds. At one place (200 ft Elevation at "Y" 1 mi N Napa Co. line, saw one bird - was standing water here in creek bed. Rich growth blackberry, nettles, willows. May have been wintering morphna or fisherella however. Along Gordon Creek s. side Gordon Valley Dam (Curry Lake) covered over 1 mile of creek with excellent habitat & found no birds except (one good morphna at mrs. Chadbourne's Bridge) morphna & fisherella. Usually these were in thistle & weeds on dry pasture away from creek; But one or 2 were in blackberry's etc at waters edge. ∴ the birds must migrate from here. One catch — this creek is permanent & flows out of a year-round spring! Must be an exception which can't upset prevailing habit or genetic trait of birds in this general area to migrate because of streams drying up. This may explain absence of fall birds along Merced R. too. Gordon Creek had Willows, Elders, some 2 vines (but plenty of open places) Polygonum, blackberry etc.

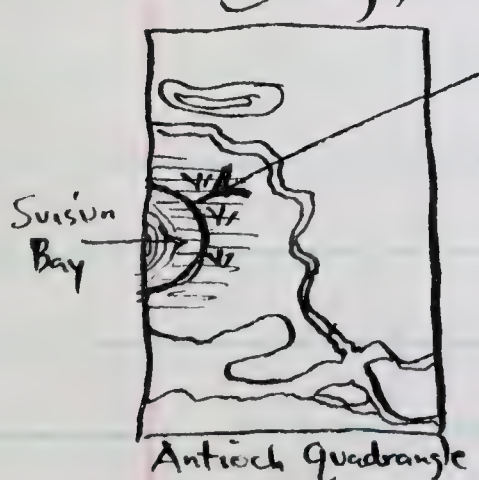
Marshall 1947 Melospiza Collections Sept Oct '47



Oct 8 Suisun Slough, .8 mi N Suisun Hill, Solano Co. Calif. 3765-3769

1st collected along artificial bank of slough marked by lower arrow. Saw only about 5 birds here in 800 yards. Habitat very narrow - about 4 or 5 yards. Mostly Scirpus olneyi 3' dry, with patches of tall S. acutus about every 75 yds. Birds usually in the latter. Birds very far apart along such a narrow habitat. Up by upper arrow I went to edge of very extensive marsh habitat - tall S. acutus & typha growing together & found birds in their usual abundance.

Oct 8 Suisun Bay shore, 3 mi S. Grizzly Isl. Ferry, Solano Co., Calif.



3770-3779 taken here near bay shore in natural appearing marsh of tall S. acutus S. californicus & typha. On bank was chenopodium, Rose, etc. Birds in greatest nos. I have ever seen except Southampton Bay. I was on edge of very wide expanse of habitat & could "squeak" birds from far and wide. Shot 6 in same clump of S. acutus about 5 yds

So many in the tules that you could hear constant long rattling of the dry stems in the wind.

Marshall, 1947

Melospiza

Collections Sept - Oct '47

Oct 12 Suisun Bay shore, mouth Sulphur Springs Creek, Solano Co. Calif.
(See Carquinez Quadrangle)

3791-3796 Taken here in great expanse of evenly mixed S. campestris & Typha with frequent patches of taller S. acutus where birds usually concentrated. Not numerous. Saw only about 8 birds. Many yellowthroats, Wrens, flushed 1 Long-eared owl from Baccharis on a dyke.

This is same spot where Stoner & I coll. 6 birds in Nov 41. There are patches of very tall loose Salicornia plants growing among S. campestris & Typha. Unusual formation.

Marshall, 1947 — *Melospiza*

Collections Sept Oct – Nov 1

Nov 1 Tomales Bay salt marsh 1½ mi NW Pt. Reyes Sta., Marin Co. Calif.

the area shown on the map here worked coll. these specimens is pure salt marsh & removed from adjacent fresh-water habitat on both sides & at head of Tomales Bay. Bds. worn: spend all their time here. Area marked ff is a regular "forest" of grindelia (cuneifolia Hall grd leaves, some flowers, very thick, clean succulent) 1 2–3' high, not spreading much, far apart, with short mat

coll 10 bds. here 3839–3848

low mat of wiped Salicornia-Distichlis forming a continuum.

Scirpus campestris chokes some of the tiniest & highest sloughs. Noted Triglochin & Limonium. Bds feed on mud banks (undercut) & around bases of the denser, bigger grindelias which grow (bigger) on edges of sloughs. Sparser elsewhere.

Typha & Scirpus diversi
" & " californicus

Bds. abundant in pairs, occasional singing or 3's or 4's with challenging ♂'s. At N tip of this Outer grindelia area ran into a regular drove of Thers (mixed with a few crowned Savannah & Lincolns?) Must have been 25 song sparrows in this loose flock.

Salicornia, Triglochin

Juncus & Triglochin

Inverness Tomales Bay

Here is where I observed on May 5 '46) Salicornia, Triglochin

pasture

Pt. Reyes Station

Scirpus calif.

Typha

willow patch where coll 10 bds. Sept '46

dense fringe of S. californicus

enlarged see photo

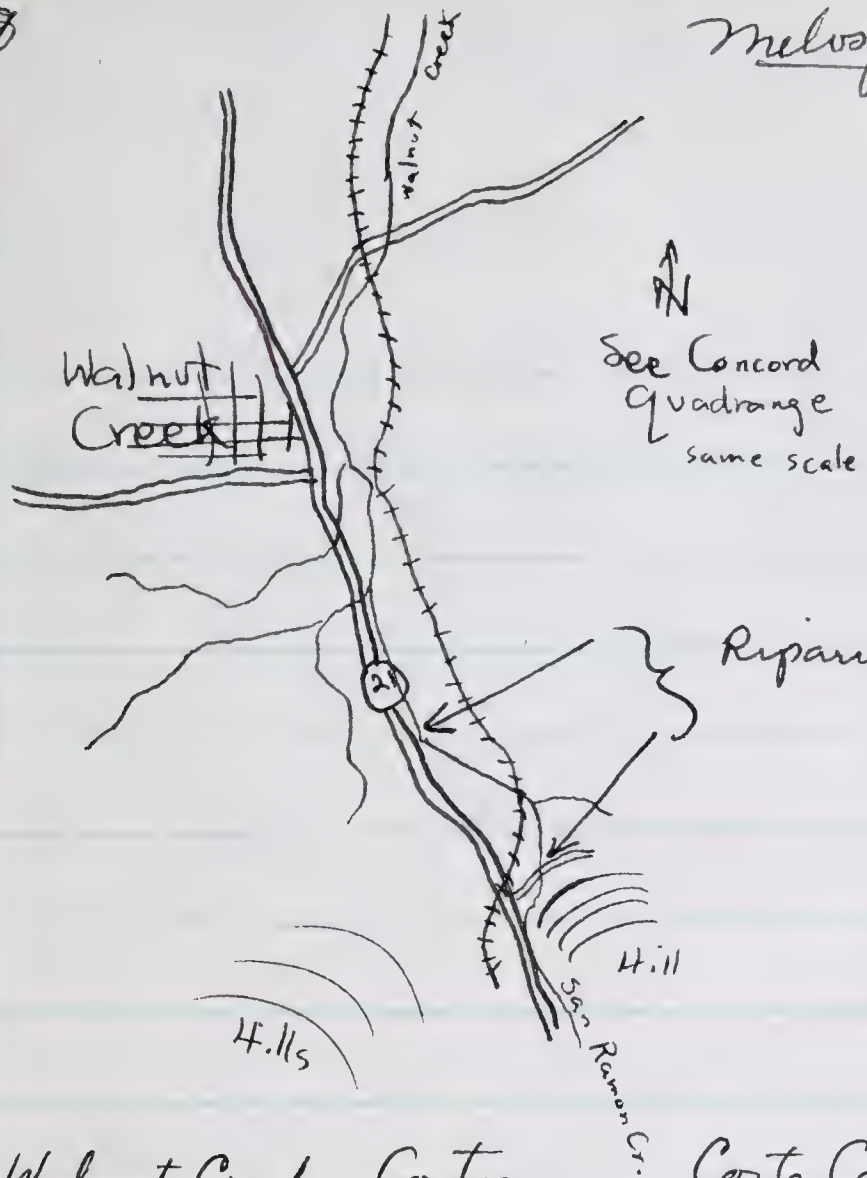
dyke

sloughs

Road to Inverness

bird also in roadside brush where operalove from (no Cunals)

Saw good "seaside chaparral" in north facing slopes of gulch s. Tomales on Hiway 1. Plenty song sparrows, lots of crowned sparrows. Pt. Reyes habitat is also north-facing.



April 11 Walnut Creek, Contra Costa Co., Calif.

11:20-12:45PM Clear, calm, sunny, warm. Veg. along stream: Box elder, Buckeye, Salix, Holodiscus, Populus, some Δ Scirpus, & Typha, Conium, Rubus vit., Rosa, Rhus diversiloba, Plenty of fresh running water at this season. Kingfishers and Black Phoebes present.

Beginning at lower arrow, walked along stream to upper arrow 11:20 - 12:15. 1st pair in Salix surrounded by Conium, 1 little patch S. californicus by a large pool. Good terr. response of ♂ to my imitated songs. 1. ♂ Circled me, singing from various perches. ♀ would squawk when he ♂ finished singing. She was down in the Conium.

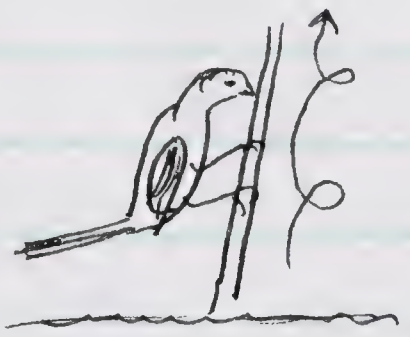
Another ♂ singing in patch scrub willow where stream valley widened.

(Possible 3rd pair in patch buckeye & elder - twittered at when ♂ sang.)

♂ singing at last bridge dense clump Salix, Rosa, perched high.

April 11 Walnut Creek, Contra Costa Co. Calif.

Last pair on far side of last bridge (upper arrow) in patch of Typha about 30 x 20 yds. Didn't sing but gave alarm note when I sang. Watch foraging. One would ascent Typha stems picking insects off stem like a nuthatch:



12:15-:45 Return trip upstream - same birds except 2nd ♂ & possible twittering pair.
Pair at 0 yards in Typha, ♂ at 50 yds,
(Twittering was at 270 yds - couldn't find birds),
590 yds (place where ♂ singing on 1st trip),
747 yds RR bridge, 840 yds ♂ & ♀ answered,
Scirpus Common Salix. 1350 yds road.
This makes pair, ♂, ♂, pair in representing 4 territories in 1350 yds or a pair every 340 yards. Only a pair and a ♂ were in portion covered last fall when stream was dry (see p. 132). These probably accidental, or spread up here from further downstream, or assoc. with gardens of residences which are now being built up. I examined these birds closely & found they were not wintering races. (Plenty crowned sparrows, & Lincoln and Fox Sparrows here)

April 1 Contra Costa Co & Alameda Co. Calif. contr.

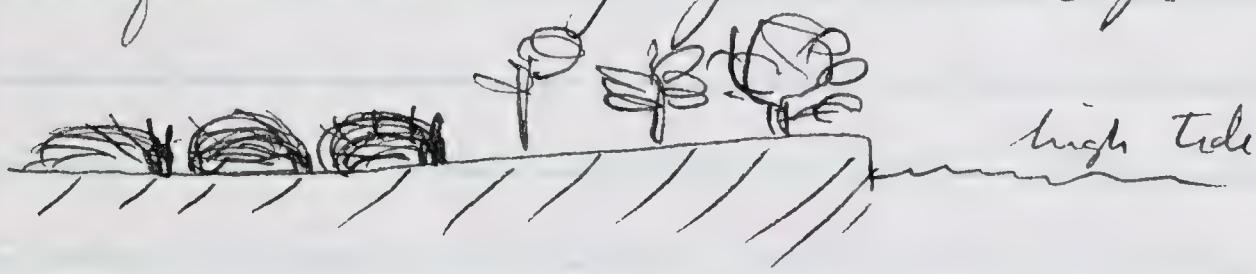
From Walnut Cr. drove to Moraga - ~~many~~ much good habitat along stream flowing NE from St. Marys res. Have looked for birds here before (1940) & found none - vagaries of overflow from reservoir. At St. Mary's reservoir found many ss. at stream entrance in extensive typha & Cornus growth. Measured typha - streams av. 3-4" apart sometimes 2", 6". At any rate there are avenues 6" wide going anywhere within densest stands.

No Song Sparrows San Leandro Reservoir - all brushed off.

San Leandro Bay: at spot where coll. 10 bds. fall 1946, looked at veg. form. Found very few mammal trails - one long one about 3" wide went straight for about 12'; but found no sign, holes, cut grass, droppings etc. However, Sal. vinosa mat has plenty of openings under it apparently caused by tides which raise the whole mass of veg & sort of sweep out debris under it. Sal. stems prostrate on 1 side, leaving bare trails on opposite side so can get around at ground level even if no mammal trails.

April 11 Alameda Co.

Further there is much bare ground edge of grindelia belt, between that and Salicornia. I found typical raised banks with grindelia alone here. On many of these banks the grind. was dead & mashed down & new stuff beginning to grow thru again. Bank must be raised 6" belt of grind extends inland 6-10 ft on very gradual slope.



Many amphipods, caterpillars, insects of all kinds seen on grd. under. Salicornia. Note that Salicornia is very stiff - a bird could not force its way between stems nos thru the prostrate portion of each bush. However, there is ample room between the bushes & under one side of many of them.

Every once in a while I came upon pure patches of Jaumea, Frankenia or Distichlis. There in area 2 x 4 yds or so - very dense stems, impossible for sparrows to go in them. Also saw occasional tuft of Triglochin.

April 18 Solano County upland habitats Covered same localities as on pp 141 & 142 of these notes. (Stoner-correspondence-had found birds absent from Lake Hermann last November — creek entirely dried up.) Stoner went along. 1st saw a gouldi at Benicia in Fennel, across st from Foeniculum-Typha area where there were redwings — this is at corner of W end of block where Stoner lives. None known previously from Benicia. Went to Green Valley Cemetery area. No song sparrows, no chickadees, no creepers. This is marginal ss habitat — getting too shaded by oaks, laurels, alders. Downstream couple miles where stream crosses E-W road were plenty birds along willows & in patch Heracleum & Juncus. ♂ here had several ters., sang, and chased out fisherella. They retreated to grass fields. None present here last winter. Saw & heard about 5 birds from bridge, — i.e. in normal abundance — examined with binocs & were gouldi. Then went to Suisun Creek, found ♂'s singing & pairs established in normal nos. at all places where we stopped last Oct & several more. Pairs giving alarm notes, etc., all typical gouldi, plenty of water in creek. 50-60 yds between pairs according to veg. Rare in shallow places where willow scrub growing on gravel bars & occasionally swept by high water. More in places where oaks or other tall trees. Most where willows occasional & good patches Heracleum & vines. There has been a wholesale influx

April 18 Solano Co. uplands Calif. of birds along Green Valley & Suisun creeks. Where latter enters hills – up to Curry Lake & Mr. Chadborne's Farm, few birds, older succession (Lanced Alder). Only one bird found, a ♂ singing at Mr. Chadborne's bridge. Found no fringilla either. At Curry Lake went for trip in motorboat, saw an ad Osprey & ad bald Eagle. Both have been around a long time, eagle has a mate in all brown plumage which we didn't see. Osprey screams when flushed. They always use same perch – Osprey in dead snag at water's edge by dam, Eagles in Oak on little grassy knoll sticking out into lake. Keepers said Eagles chase ducks & geese, saw Osprey with huge fish. Osprey spends almost all its time sitting on snag, is more wary than eagles. Its evening is always shared by Night Herons.

Went to Lake Herman – song sparrows abundant in Salix, S. oliveyi & typha at stream inlet. Saw pair alarmed about nest. Heard & saw many more. Not S. oliveyi growing in fresh-water stream!

Conclusions: Song Sparrows have migrated en masse from an unknown wintering ground back to Lake Herman, Green Valley Creek & Suisun Creek, already well established, paired, territories set up. Have not penetrated marginal habitats in hills except the 1 at Chadbornes. This absence the last winter not indicative.

Melospiza

June 10 Upper San Francisquito Creek, Palo Alto, Santa Clara Co. Calif. Visited same stretch of creek where found only 6 birds last fall (and coll. three), on Webb Ranch. ♂ singing at 1st pool, ♀ carrying food at second pool (Typha), ♂ singing 100 yds from there, farther on a jaw, then 60 yds more to another singing ♂. In other words 4 pairs represented here in distance where 4 bds found (2 coll.) last fall. Was running water. Now found upstream in denser laural oak, & alder where was a pool & 2 birds last fall (1 coll). Downstream from this sector — all was dry last fall & I heard no birds — were plenty singing ♂'s every 50 yds or so. Didn't census here in fall so don't know if real increase or not. But then were plenty birds in area which was dry then, not now. There could have been more then in fall but weren't singing & would have been hard to find. Really doesn't look like migration here therefore — not conclusive. (This lower sector is where I coll. 7 in fall of '41.)

Must call attn to vast no. individuals & kinds of birds found at 1st pool (where road crosses creek by

Melospiza

June 10 Upper San Francisquito Creek, Santa Clara Co., Calif.
a ford.) :

1 Red tailed Hawk
1 belted Kingfisher
2 Mourning Doves
2 Downy Woodpeckers
Pair ash throated flycatchers
with nest & 3 young in
vertical water pipe, 18" down.
Pair Pewees
2 pr. Phoebes
Many Violet-gr. Swallows
one alighted in road
Many Cliff Swallows
Cal Jays
pr. Titmice
Bewick Wren pair
Warbling Vireos pair - bathing
Hutton Vireos "
pair Yellow Warblers
pair Song Sparrows
Linnits
purple finches } bathing
pr Bullock Orioles
meadowlarks
Brewer Blackbirds
pair bluebirds
Chestnut-backed Chickadees

No. ..... Date .....

Locality Point Lobos, Carmel Bay, Bay Farm Island, Alameda Co. Calif.
Tomales Bay, Marin Co. Calif.
Point Lansing, Monterey Co. Calif.

Subject Song Sparrow Habitats, vegetation. Prints are
loaned in "Field Notes" 1946-48, Marshall, J.T.

Photographer Joe Marshall

Marshall
1946

Tomales Bay Salt Marsh
May 5, 1946
Song Sparrow nest in Salicornia

Marshall
1946

Tomales Bay salt marsh, May 5, 1946

slender plant is triglochin

Marshall
1946

Salicornia marsh, San Leandro Bay 1946. North end
Bay Farm Island, Alameda Co., Calif.

looking
south

Tomales Bay salt marsh, May 5, 1946

Marshall
1946

Moss Landing, Monterey Co. Salt marsh
Apr. 7, 1946. No song sparrows here.